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BOARD OF EDUCATION.

REGULATIONS

AMENDING THE REGULATIONS FOR
TECHNICAL SCHOOLS, SCHOOLS OF ART, AND
OTHER FORMS OF PROVISION OF FURTHER
EDUCATION IN ENGLAND AND WALES. (IN
FORCE FROM 1st AUGUST 1914.)

Presented to both Houses of Parliament by Command of His Majesty.



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[Cd. 7731.]

AMENDING REGULATIONS.

(i) The following Article is hereby substituted for Article 33 of the Regulations for Technical Schools, Schools of Art, and other forms of Provision of Further Education in England and Wales for the year beginning the 1st August, 1913 (Cd. 6925 of 1913), and for the corresponding Article of the Regulations for the year beginning the 1st August, 1914 (Cd. 7531 of 1914), and the Board of Education may apply the Article in assessing the grant to be paid in respect of Schools for work done during either or both of the above School Years.

“Article 33. The Board may, in lieu of any grant otherwise payable under Articles 29 to 32 of these Regulations, pay an inclusive annual grant in respect of the whole work, recognized under Chapter 2 of the Regulations, of any efficient School which occupies a definite, stable and important place in the educational organisation of the area, and provides approved Senior or Advanced Courses of instruction arranged with due regard to the educational needs of the students. This grant will remain the same from year to year, subject to reassessment after consideration of the character, efficiency, volume, and cost of the work of the School, or of the estimated effect of any redistribution of work between the School and any other School or Course in respect of which grants are payable under these Regulations.”

(ii) The following Article is hereby added to Chapter 2 of Part I. of the Regulations for Technical Schools, Schools of Art, and other forms of Provision of Further Education in England and Wales for the year beginning the 1st August 1914 (Cd. 7531 of 1914):—

“Article 34. (a) The Board may, in lieu of all grants otherwise payable under Articles 29 to 32 of these Regulations, pay an inclusive grant to any Local Education Authority in respect of all Courses satisfying the conditions of the Regulations in Schools under the direction of the Authority for the School Year 1914-15.

(b) The inclusive grant will be based upon the aggregate grants paid to the Authority in respect of similar Courses for the School Year 1913-14, subject to an increase or decrease pro-



portionate to any increase or decrease in the class hours (or other lesson hours) occupied by the Courses.

(c) Instruction given in Schools receiving an inclusive grant under Article 33 for the School Year 1914-15 will not be taken into account for the purposes of this calculation, and the Board may also leave out of account the hours of any Courses which they consider to have been unduly prolonged, or arranged for an unreasonably small number of students whose attendances would have been eligible for grant under Article 4 of the Regulations."

L. A. SELBY-BIGGE.

11 December 1914.

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PREFATORY NOTE.

1. In the Prefatory Note to the Regulations for Technical Schools, &c., in force from the 1st August 1913, attention was drawn to the separate bodies of Regulations issued in that year for certain types of Schools and Classes previously aided by the Board under the general description of Technical Schools, Schools of Art, and other forms of Further Education, and it was intimated that certain of these separate bodies of Regulations might in future be incorporated in a single volume with the General Regulations for Evening and Technical Schools and Schools of Art. In the present volume the Board have accordingly included, in addition to Regulations for Evening Schools, for Day Courses (not being University Courses) in Technical Institutions, and for Schools of Art, the Regulations for Junior Technical Schools and the Regulations for University Tutorial Classes. For the present the grants for Schools of Nautical Training will continue to be administered under separate Regulations, which have been so drawn as to be complete in themselves. Part I. of the volume corresponds with the Regulations of last year for Technical Schools, Schools of Art, &c. [Cd. 6925]; Part II. with the Regulations for Junior Technical Schools [Cd. 6919]; and Part III. with the Regulations for University Tutorial Classes [Cd. 6866 of 1913].

2. No changes of substance are made in the Regulations for Junior Technical Schools or in those for University Tutorial Classes. Certain changes, explained in the following paragraphs, have been introduced in Part I. of this volume.

3. *Article 4 (b).*—Pupils who are still in attendance at Junior Technical Schools will not be eligible for grant in respect of their attendance at Evening Classes or Schools of Art.

4. *Article 27.*—Under the organisation which exists in certain Schools students have been allowed to attend more than one class in a subject. This is not necessarily unsound, from an educational point

of view, if the classes are so linked up as to provide continuous courses of instruction without duplication or omission, and if the Board are satisfied that satisfactory arrangements are made for this purpose, they are prepared to allow a student's attendances in two or more classes in a subject to be aggregated and treated as having been made in one course for the purposes of Article 29 (a). Under this Article a student's attendance in any course in a subject may not be counted for grant unless, subject to exceptions not here in question, he has received at least 14 hours of instruction in the course. Similarly the Board are prepared to allow the hours of instruction given to the several classes in a subject attended by a student to be aggregated for the purposes of Article 28, provided there is a proper linking up of classes for the purpose of securing that students admitted to more than one class in a subject shall follow continuous courses of instruction in the subject.

5. *Article 28 (b).*—The Board have satisfied themselves that courses of less than 20 hours in duration but not less than 10 hours in duration may with advantage be held in the intervals between ordinary winter sessions for the benefit of students who have attended a related course in the preceding winter, or for students who intend to follow a related course in the coming winter. Such courses have in the past been aided as extensions of winter courses or, in certain cases, as parts of courses belonging to the following winter session, but the Board are now prepared to consider applications for the special separate approval of such courses in any subjects as "Short Courses." This provision is additional to the provision already made for the special approval of "Short Courses," which may be held at any time in the year, consisting of concise and suggestive instruction for students whose previous general familiarity with the subject enables them to profit by a Short Course. The aid in respect of Single Subject Students attending Short Courses of either type will be calculated upon the attendance of those students only who have attended for not less than two-thirds of the hours of instruction given in the Short Course.

6. *Article 29 (b).*—The Board are similarly prepared to accept Grouped Courses, held in the intervals between

ordinary winter sessions, which do not satisfy the ordinary requirements of Article 29 (b) as to the duration of Grouped Courses.

7. *Omission of the Preparatory Division.*—The Board have found that in certain Schools courses of instruction in a number of individual subjects, in one or more of which less than 20 hours of instruction is provided, have been combined and proposed for recognition as one course notwithstanding that the whole time occupied by the instruction is less than four hours a week or less than 80 hours in all. Such a combination is not ordinarily recognisable as a Grouped Course, and these arrangements appear to have been adopted under the assumption that a paragraph in the Registration Rules, having reference to courses of a preparatory type intended to bring backward students up to the level usually attained on leaving a Public Elementary School, authorised the treatment of a combination of any subjects suitable to an Evening School as a single subject. Though the Registration Rule in question was intended to make provision for instruction of a strictly elementary character in Reading, Writing and Arithmetic, it has been frequently misinterpreted as extending to subjects like Drawing, Needlework, Manual Instruction, Elementary Science and Physical Training, which do not fall within the Preparatory Division and are not in all cases capable of being educationally combined in one subject. It is doubtful how far such courses as those in question, in which a few lessons, often of not more than half-an-hour's duration, are given in a large number of different subjects, have a substantial educational value, and where the total time available for instruction is limited, the Board are satisfied that better educational results will follow if the number of subjects studied is so restricted that an adequate amount of time can be given to each. It appears also to the Board that there is no longer any need to provide for the recognition of courses in which subjects like English and Arithmetic are amalgamated for purposes of instruction. That method was, no doubt, appropriate at the time when very backward students needing instruction in the barest rudiments were commonly attending Evening Schools, but it is satisfactory to know that the number of such students is now negligible as the result of the operation of various causes,

which need not here be referred to. Nor does it appear to the Board to be necessary to retain in their Regulations special provision for a Preparatory Division, intended to comprise only such instruction as may be included in a good elementary education. It will, no doubt, be necessary for some time to come to provide in Evening Schools Grouped Courses of a preparatory standard, as defined by Article 27 (*d*) of the present volume, but with the exception of Music, all the subjects which are taught in Elementary Schools are referable to one or other of the Divisions I. to VI. of former Regulations. The Board have therefore decided not to retain special provisions for instruction of this standard, and to make provision for Music as explained in the next paragraph.

8. *Music*.—In addition to instruction in Music falling under the Preparatory Division, a certain amount of instruction in Theory of Music of a higher standard than that contemplated by the Preparatory Division has been aided either under Division IV. or under the special provisions of the small print of Article 32 (*b*), which provided for the recognition of courses not definitely referable to one or other of the Divisions. Article 32 (*k*) of the present volume accordingly provides for the recognition of suitable courses in Singing or in the Theory, History, or Appreciation of Music. Instruction in Instrumental Music, as in the past, will not be aided. In the new Article, the provisions which define the rates of grant have been so drawn as to enable the Board to continue the former rates of grant for courses in Music corresponding to those which have been recognised and aided under previous Regulations.

9. *Article 41 (a)*.—In certain Institutions providing Technical Institution Courses, it has been customary to allow a few students employed in the industries to which the courses are related to take part-time day courses of limited duration in which it has not been practicable for them to attend for 200 hours. Where the Board are satisfied that students can, with educational advantage to themselves, and without detriment to the interests of full-time students attending the same classes, take part-time courses of this character, they may in future make an allowance of grant at a rate

which will not be higher in proportion to the amount of instruction received than the rates assignable for the full-time course. This arrangement is intended to supersede the former arrangement under which, at certain Schools classes have been recognised under Chapter 2 in respect of students of the type in question, and under Chapter 3 in respect of full-time students taking the class as part of a Technical Institution Course.

A. A. Selby-Bigge

20 July 1914.

BOARD OF EDUCATION.

Regulations for Technical Schools, Schools of Art, and other Forms of provision of Further Education in England and Wales.*

N.B.—*Articles or parts of Articles which are either new or substantially modified are printed in italic type.*

PRELIMINARY ARTICLE.

(a) No grant is made under these Regulations in respect of any Public Elementary Schools, Pupil-Teacher Centres or Preparatory Classes, Training Colleges for Teachers in Elementary Schools or in Secondary Schools, or Training Schools for Teachers of Domestic Subjects, or in respect of any work falling within the purview of the Exchequer grant to University Colleges or the Board's grants in aid of technological and professional work in Universities, or, in the case of a Secondary School, in respect of any part of it for which grant is payable under the Regulations for Secondary Schools, or in respect of any School in receipt of grants under the Regulations for Schools of Nautical Training.

(b) In no case is a grant payable in respect of instruction in Religious Subjects.

(c) The conditions required to be fulfilled in order to enable any grant to be made by the Board of Education (hereinafter called "the Board") in respect of any School, Class, or Institution, other than those referred to in (a) above, are those contained in the following Regulations, which take effect from 1st August 1914.

(d) The School, Class, or Institution in respect of which a grant is made is hereinafter called "the School."

(e) If any of the conditions of award of grant are not fulfilled, the Board may withhold the grant, or if they think fit, pay it with or without deductions, and may warn the Managers that a grant will not again be paid in similar circumstances.

* These Regulations may be quoted as "The Regulations for Technical Schools, &c."

(f) The decision of the Board as to whether the conditions have been fulfilled in any case, or as to the application or interpretation of these Regulations, is conclusive.

(g) A copy of the Regulations must be kept on the School premises.

PART I.

CHAPTER 1.

GENERAL CONDITIONS.

1.—(a) The School must be superintended by a suitably constituted body of Managers, to whom, subject to the conditions hereinafter provided, the grant will be paid; and a person must be appointed to act as correspondent on behalf of the Managers. Where in the opinion of the Board it is necessary, the body of Managers must include women. A list of Managers available for reference must be kept on the School premises.

(b) The body of Managers must include at least one person able to visit the School frequently. Where a Local Education Authority are the Managing Body, exemption from this condition may be given if the Board are satisfied with the arrangements made for securing due supervision and local interest.

2. In the case of any School working under the direction of the Council of any County or County Borough, the grant will be paid to the Council, and the correspondent will be appointed by the Council.

3. A person attending as a day or evening student shall not be required, as a condition of being admitted into or remaining in the School, to attend or abstain from attending any Sunday School, place of religious worship, religious observance, or instruction in religious subjects in the School or elsewhere; and the times for religious worship or for any lesson on a religious subject shall be conveniently arranged for the purpose of allowing the withdrawal of any such scholar therefrom.

4.—(a) Grant will not be payable in respect of the attendances of a student (1) who is under 12 years of age, or (2) who is still in attendance at any School or course of instruction where his attendance is recorded for the purpose of a grant under any other Regulations of

4.—(cont.)

the Board, or (3) who is in attendance at a Certified Industrial School or Reformatory.

(b) *Attendance at instruction under this part of the Regulations made by a student who is still in attendance at a Junior Technical School will not be eligible for grant.*

(c) Pupil-Teachers may not attend Schools recognised under these Regulations unless with the written consent of the Head Master or Mistress of the Pupil-Teacher Centre attended by them, or unless attendance at such Schools forms part of the arrangements for their instruction approved under Article 28 of the Board's Regulations for the Preliminary Education of Elementary School Teachers; in no case may the attendances of Pupil-Teachers be counted for grants.

5.—(a) Grant will not be payable under these Regulations in respect of Courses intended for students over 16 or 17 in which the instruction given is chiefly in Technical Agricultural Subjects, or in respect of Courses given as part of his staff work by a teacher recognised by the Board of Agriculture and Fisheries as a member of a County Agricultural Staff or of the staff of an Agricultural College; except that all Courses for the training of Teachers in Schools and Classes aided by the Board of Education will be eligible for aid under these Regulations, even though the subject of instruction be agricultural or the teacher be a member of a County Agricultural Staff or the staff of an Agricultural College.

(b) For the purpose of these Regulations Gardening will be regarded as a Technical Agricultural Subject if taken in a Course planned for students over 16 or 17.

6. The term "year" in these Regulations means the twelve months ending the 31st July.

7.—(a) The School must be open at all reasonable times to inspection by the Board.

(b) A deduction from the grant not exceeding 1l. may be made if the Inspector finds any class closed at a time when the time-table provides for instruction being given.

(c) At least a week's notice of any alteration in the teaching staff, or in the time-table, affecting the place, days, or hours of meeting, or of a holiday, or of the date of the closure of a class, whether for the session or merely

7.—(cont.)

for a time, must be given to the Inspector named to the School for this purpose. Unless it is possible to give at least seven days' clear notice of an intended closure, such notice should be given by telegram addressed by name to the Inspector at "Instruction,* Parl., London" (the telegraphic address of the Technological Branch of the Board of Education).

8.—(a) The School must not unduly compete with any other School.

(b) Before recognising as eligible for a grant under these Regulations any School not working under the direction of a Local Education Authority, the Board will, as a rule, invite the opinion of the County or County Borough Council on the question of the necessity of such School, and will have regard to the co-ordination of all forms of education in the area of the Council.

9. The School must be suitable in character and financial position to receive aid from the Board and must not be conducted for private profit, or farmed out to the teacher.

The extent to which and the conditions under which Residential Institutions can be regarded as eligible for grants under these Regulations are now under consideration; and for the present the Board are not, as a rule, prepared to regard as eligible for grant any such institutions which are not already in receipt of grant.

10. No student may be refused admission on other than reasonable grounds.

11.—(a) The scale of fees must be suitable to the circumstances of the locality, and must have been approved by the Board either for the individual School or for a group of Schools of which it forms a part.

(b) If it is desired to charge no fees in any School or group of Schools, the proposals submitted for the Board's approval must show why this is thought desirable.

(c) If it is desired to waive fees in the case of individual students, or to return fees to individual students at the end of the session, the proposals submitted for the Board's approval must show the conditions under which and the methods by which such waiving or returning of fees will be carried out.

* As regards Wales (including Monmouthshire) the telegraphic address "Principality, Parl., London," should be used.

12. The School must have adequate local support. At least 25 per cent. of the expenditure of the School, or group of Schools under the same Managers, or under the direction of the same County or County Borough Council, should be met from sources other than the Board's grant, such as fees, subscriptions, endowments, or the funds of Local Authorities.

13. The grant must be expended to the satisfaction of the Board.

14.—(a) The attendances of all students admitted to the School must, except as provided by Article 39 (b), be recorded in the Registers supplied by the Board, and in accordance with the Rules furnished therewith.

(b) Records must also be kept in an admission register or some other form, and must be in accordance with any Rules that may be prescribed by the Board.

(c) If required by the Board, through their Inspector or otherwise, the Registers and other School documents, or any of them, must be submitted for inspection forthwith.

15. All returns, statistical and financial, called for by the Board from any body of Managers or Local Authority must be duly made.

16. The School must be efficient, and the progress of the students must be satisfactory.

17.—(a) The premises must be sanitary, convenient for teaching purposes, adapted to the circumstances of the School, and provided with such equipment and appliances as are necessary for the approved course or courses of instruction.

(b) The plans of the site and buildings of any new School specially provided for the purpose of instruction under these Regulations, or of any enlargements or alterations of existing Schools made for the same purpose, must be submitted for the Board's approval. The details of any proposals for installation of equipment must, if required, be similarly submitted.

18.—(a) The Teaching Staff must be adequate and efficient.

(b) Provision must be made for the supervision of the teaching staff as regards organisation, registration, the advice given to Students, and the co-ordination of the subjects taught. Where, in the opinion of the

18.—(cont.)

Board, it is necessary for this purpose, a Head Teacher must be appointed.

(c) The Board may decline to recognise a teacher in case of misconduct. In such a case they will use every available means of informing the teacher of the charges against him, and of giving him an opportunity for explanation.

19. The teachers must, as a rule, be paid by fixed salaries. They must not engage in any other employment which will prevent the efficient discharge of their duties as teachers.

20.—(a) The curriculum of each School must be suitable to the circumstances of the locality, and must be approved by the Board.

(b) The syllabus and time-table of the instruction to be given in each subject must be submitted to the Board. A copy available for reference must be kept on the School premises. The Board may require the modification of any syllabus which appears to be unsuitable.

21.—(a) The instruction should be co-ordinated with the educational provision of the area as a whole.

(b) Mere attendance at a course of lectures unaccompanied by class exercises will not, as a rule, be regarded as constituting satisfactory instruction. University Extension Courses will only be recognised provided that each meeting is registered as a single period of instruction, and that at least half of each meeting other than the first is devoted to class exercises.

(c) Where in the opinion of the Board it is necessary, the subjects taken in a School must be so combined as to provide Grouped Courses of instruction adapted to the needs of the different types of students in attendance, and arranged so as to be progressive from year to year.

22.—(a) The arrangements regulating the admission of students must be such as to exclude from a course or class any student who, from want of sufficient preliminary training, or other cause, is not qualified to take advantage of the instruction given in it. The grant may be withheld on account of any students whom the Inspector reports to be thus unqualified.

22.—(cont.)

(b) The practical work of the students must not include a continued repetition of manipulative processes of which they have acquired a knowledge.

23. No grant will be paid in respect of any attendances lost, or on account of any period during which the School is closed for epidemic illness, but where the Board are satisfied that any failure to comply with the conditions of Articles 28, 29, 40, 41, 42, 45, 49, or 54 has been due to epidemic illness or other unavoidable cause, they may relax the conditions of those Articles so far as may be necessary to meet the case.

24. Where it is necessary on educational grounds that a course should extend over parts of two years, the Board may at their discretion treat the course for purposes of grant as belonging to either of those years.

CHAPTER 2.

CONDITIONS OF GRANT SPECIALLY APPLICABLE TO "EVENING SCHOOLS" AND SIMILAR SCHOOLS AND CLASSES.

25.—(a) Grants under this Chapter will, as a rule, only be payable on account of Schools or Classes intended for the instruction of those whose ordinary employment or avocation occupies the greater part of their time.

(b) Where application is made for the recognition of any School or Class meeting at an earlier hour than 4 p.m. (or, on Saturdays, 1 p.m.), the Board must be satisfied beforehand that the condition (a) is fulfilled.

26.—(a) Applications for recognition, or continuance of recognition, under this Chapter must be made to the Board on the prescribed Forms, which should be *submitted to the Board by the date named on the Forms and in accordance with the directions given on them.*

(b) If, after the application has been submitted, any material modification, such as the addition or omission of a course or of a subject in a course, is made in the curriculum of a School, a notification must be sent to

26.—(cont.)

the Board on the prescribed form at least two weeks in advance.

(c) In the case of applications for recognition or notifications of modifications in the curriculum received after the prescribed date, a deduction of 1 per cent. for each week of delay may be made from the grant otherwise payable.

27. *The application to be made on the prescribed Forms must contain a complete list of the Grouped Courses and of the individual courses and classes in each subject for the year.*

(a) *By a course in a subject is meant a coherent and progressive series of lessons (or combination of more than one series of lessons) on that subject, designed to be taken as a whole within the year by each student who attends it.*

(b) *By a class is meant a group of students receiving in common a series of lessons which constitutes the whole or a part of their course in the subject.*

(c) *Separate particulars are required for each class in each subject, and as a rule each class in a subject will be regarded as taking a separate course in the subject; but the Board may accept arrangements under which a course in a subject is divided between two or more classes if they are satisfied that the arrangements secure for students continuous courses without duplication or omission.*

(d) *Grouped Courses consisting of balanced combinations of courses in different subjects should be arranged with a view to the particular types of students contemplated, and should be co-ordinated in a succession of yearly stages so as to form a complete and progressive plan for continuous education. Grouped Courses should be classified as follows:—*

- (i) Preparatory, if they are adapted to the needs of students who are under 14 or who require a repetition of the work provided for scholars under 14 in Public Elementary Schools.
- (ii) Junior, if they are adapted to the needs of students who leave Public Elementary Schools at the age of 14 and proceed at once to a School recognised under this Chapter. A complete Junior Grouped Course should as a rule extend over a period of two years.

27.—(cont.)

- (iii) Senior, if they are adapted to the needs of students who have passed through Junior Courses or who leave Day Schools of a higher grade than ordinary Public Elementary Schools at the age of 15 or 16 and proceed at once to a School recognised under this Chapter. A Senior Grouped Course should extend over a period of at least two years.
- (iv) Advanced, if they are adapted to the needs of older students and aim at reaching, within the limits of the subjects covered by them, the standard of University work.

The classification set out above is for the purpose of fixing the standards of Grouped Courses. Individual students may be admitted to the Courses best fitted to their individual attainments.

28. No grant will be made for instruction in any course in any subject in which less than 20 hours of instruction is given either in the year or as provided in Article 24; except that—

- (a) Instruction in any subject for a less number of hours may be approved of as part of a Grouped Course satisfying the requirements of Article 29 (b).
- (b) *Short Courses of not less than 10 hours' duration held in the intervals between ordinary winter sessions may be specially approved in any subjects.*
- (c) *Short Courses of not less than 10 hours' duration held at other times in the year may be specially approved in certain subjects if they consist of concise and suggestive instruction given to students whose previous general familiarity with the subject enables them to profit by instruction of this kind. The Board will not, as a rule, recognise such Short Courses for students of less than 16 years of age, or in Arithmetic, English and other subjects, if treated as elements of general education, but they will be prepared, for example, to recognise Short Courses for Adults in Ambulance or Sick Nursing and Short Courses for Women in the Management of Children or in Domestic Hygiene. Short*

28.—(cont.)

Courses for Teachers may also be recognised, but as a rule no course in Physical Exercises intended as a preparation for giving instruction in accordance with the Board's Syllabus of Physical Exercises for Schools will be approved if of less than 20 hours' duration.

29.—(a) No student's attendance in any Course in any subject may be counted for grant unless he has received at least 14 hours of instruction in that Course either in the year or as provided in Article 24; except that—

(i) The attendances of students who have received at least 14 hours of instruction in a Grouped Course satisfying the requirements of Article 29 (b) and carried out on lines accepted by the Board, may be counted, even though the hours were in different subjects, if the number of hours received by all such students taken together amount to an average number of at least 60 for each such student or to at least half the total possible number of hours which might have been received by all such students taken together.

(ii) The attendance of a student at a Short Course specially approved under Article 28 (b) or (c) may be counted for grant if he has received at least two-thirds of the total number of hours of instruction included in the course.

(b) For the purposes of this Article and of Article 28 no combination of subjects will be regarded as forming a Grouped Course if the Board have refused to accept it on educational grounds, or if it occupies less than four hours a week or eighty hours in all; except that the Board may relax these requirements as to duration in special cases such as *courses held in the intervals between ordinary winter sessions*, short full-time vacation courses for teachers or courses for teachers held on Saturdays.

30.—(a) Not more than 160 hours of instruction in subjects under Divisions I. to V. and VII. of Article 32 may be counted for grant in a School for any student in one year.

(b) The Board may relax this condition in the case of a grouped course if application has been made to the Board for this purpose on the prescribed form,

30.—(cont.)

with full particulars of the course and conditions of attendance, before October 1st.

(c) No such relaxation will be allowed in the case of classes for Supplementary and Uncertificated Teachers in Elementary Schools preparing for the Board's Preliminary Examination for the Certificate or an equivalent Examination or for the Board's Certificate Examination.

(d) Not more than 60 hours of instruction in subjects under Division VI. of Article 32 may be counted for grant in a School for any student in one year.

31. The rates payable under Article 32 will be determined by the Board upon consideration of the character of the subjects taught, the extent to which organised and continuous courses of instruction are effectively carried out, and other evidence as to the work and circumstances of the School.

32.—(a) Subject to the foregoing conditions a grant may be paid for each complete 20 hours of instruction received by registered students in an approved subject or course of instruction.

(b) The rate of grant payable will be within the limits applicable to the Divisions in which the subject or course is included, and when a course includes subjects proper to different Divisions, the rate will be within limits intermediate between those applicable to these Divisions.

(c) The classification of instruction under "Divisions" is not intended in any way to limit the freedom of Local Education Authorities, Managers, or Teachers, in *submitting for approval*—

- (i) *Grouped Courses including subjects appropriate to the several Divisions;*
- (ii) *Courses in subjects which are not definitely referable to one or other of the Divisions but are suited to the circumstances of the locality whether urban or rural.*

DIVISION I.—LITERARY AND COMMERCIAL.

(d) (i) Any Literary or Commercial subject may be accepted if a suitable Syllabus is submitted. The rate of grant for these subjects will, as a rule, be from 2s. 6d. to 3s. 6d., but may, in the case of instruction of a higher standard than that appropriate to a Junior

32.—(cont.)

Grouped Course, be increased up to 5*s.* for Literary subjects and 8*s.* 6*d.* for Commercial subjects.

(ii) If a School provides instruction eligible for aid at more than one of these rates, the Board may alternatively assess a single rate, intermediate between 2*s.* 6*d.* and 8*s.* 6*d.*, for all the work of the School falling under Division I.

(iii) No lesson of less than one complete half-hour will be allowed to count as instruction in this Division.

DIVISION II.—ART.

(e) (i) The ordinary rate of grant payable will be from 2*s.* 6*d.* to 3*s.* 6*d.*

(ii) The rate may be increased up to 15*s.*

(iii) Subject to the conditions of Article 31, the rate will depend upon—

(a) the proportion of advanced work and of work requiring special equipment ;

(β) the character and efficiency of the instruction and equipment ;

(γ) the qualifications of the teacher ; and,

(δ) in cases where the instruction is arranged with definite relation to the requirements of a particular craft, or group of crafts, and includes practical instruction in the craft methods necessary to illustrate corresponding systematic instruction in drawing, modelling, or design, the extent to which the course is concerned with principles and their application as distinct from practice in a craft with a view to the acquirement of manipulative skill.

(iv) No lesson of less than one hour will be allowed to count as instruction in Art.

DIVISION III.—MANUAL INSTRUCTION IN WOOD, METAL,
OR OTHER MATERIALS.

(f) (i) The ordinary rate of grant payable will be from 2*s.* 6*d.* to 3*s.* 6*d.*

(ii) When special equipment has been provided, the rate may be increased up to 5*s.*

(iii) No lesson of less than one hour will be allowed to count as instruction in this Division.

32.—(cont.)

DIVISION IV.—SCIENCE AND TECHNOLOGY.

(g) Any general or special branch of Science (including Mathematics) or of *Technology* will be accepted, if a suitable syllabus is submitted.

(i) The ordinary rate of grant payable will be from 2s. 6d. to 3s. 6d.

(ii) The rate may be increased up to 15s.

(iii) Subject to the conditions of Article 31, the rate will depend upon—

(a) the proportion of advanced work and of work requiring special laboratory facilities and equipment ;

(β) the character and efficiency of the instruction and equipment ;

(γ) the qualifications of the teacher ; and,

(δ) in cases where the instruction is arranged with definite relation to the requirements of a particular trade, or group of trades, and includes practical instruction in the trade methods necessary to illustrate corresponding systematic instruction in the underlying scientific principles, the extent to which the course is concerned with principles and their application as distinct from practice in trade-processes with a view to the acquirement of manipulative skill.

(iv) No lesson of less than 40 minutes will be allowed to count as instruction in this Division.

DIVISION V.—HOME OCCUPATIONS AND INDUSTRIES.

(h) Any course of instruction in Domestic Subjects, or in the proper performance of ordinary domestic duties or occupations, or in minor home industries, whether urban or rural, will be accepted, if a suitable syllabus is submitted.

(i) The rate of grant payable will, as a rule, be from 2s. 6d. to 3s. 6d.

(ii) In subjects, other than Needlework, which involve exceptional expenditure for materials and appliances, the rate of grant may be increased up to 5s. 6d., provided

32.—(cont.)

that the teaching is satisfactorily illustrated by experiment, or that practical work is satisfactorily carried out by the students themselves.

(iii) No lesson of less than 40 minutes will be allowed to count as instruction in this Division.

DIVISION VI.—PHYSICAL EXERCISES.

(j) Any course of Physical Exercises which aims at the general physical development of those attending it, and is adapted to the age and sex of those under instruction, will be accepted if a suitable syllabus is submitted.

(i) The ordinary rate of grant will be 1s. 6d.

(ii) The rate of grant may be diminished if the number attending a class at one time exceeds 20.

(iii) Managers must use all reasonable endeavour to encourage those attending classes recognised under this Division to attend also classes recognised under some other Division.

(iv) No lesson of less than 30 minutes and no attendance of more than one hour on any one day will be recognised for the purpose of this Division.

Courses in Physical Training for Teachers must include instruction in the elementary theory of the subject and the methods of teaching it as a preparation for giving instruction in accordance with the Board's Syllabus of Physical Exercises for Schools. Such courses do not come exclusively under this Division, and are therefore not subject to the limitations (i) to (iv).

DIVISION VII.—MUSIC.

(k) *Under this division the Board may recognise suitable Courses in Singing or in the Theory, History or Appreciation of Music.*

(i) *The rate of grant payable for Courses in which the instruction given is principally or exclusively in Singing will be from 1s. 6d. to 2s. 6d.*

(ii) *The rate of grant payable for instruction in the Theory, History or Appreciation of Music will be from 2s. 6d. to 3s. 6d., but the rate of grant may be exceptionally increased to not more than 5s. for instruction in Theory of Music higher than that appropriate in a Junior Grouped Course.*

(iii) *No lesson of less than one half hour in duration will be recognised.*

32.—(cont.)

(iv) *Courses for teachers intended as a preparation for teaching Singing in Schools under the Board's inspection do not fall exclusively under this division and are not subject to the limitation laid down in (i) above.*

Fixed Annual Grant.

33. Provided that the arrangements and organisation of the work as a whole are satisfactory for the purpose, the Board may make a fixed annual grant in respect of any efficient school which occupies a definite place in the educational scheme of the area, and provides approved courses of organised instruction, arranged with due regard to the trade, industry, or employment of the students, and extending over four or more years. This grant will be equivalent in the first instance to the amount paid for the year immediately preceding. It will remain the same from year to year subject to re-assessment based upon the character, efficiency, and volume of the work of the School, or upon an estimation of the effect of any redistribution of work between the School and any other school to which grants are payable under these Regulations.

No School not previously aided under this Article will receive a Fixed Annual Grant for the year 1914-15.

34. *Cancelled.*

CHAPTER 3.

CONDITIONS OF GRANT SPECIALLY APPLICABLE TO
"TECHNICAL INSTITUTION COURSES" AND "DAY
TECHNICAL CLASSES."

35. Organised courses of instruction in Day Classes, including advanced instruction in Science, or in Science and Art, given with the aid of a staff and equipment adequate for the purpose, may be recognised as "Technical Institution Courses," and grants may be made to institutions in respect of courses so recognised under the Regulations contained in Articles 36 to 41.

36. Applications for recognition or continuance of recognition under Article 35 must be made to the Board on the prescribed Forms, which should *be submitted to the Board by the date named on the Forms and in accordance with the directions given on them.*

37. Provision must be made for at least a two years' systematic course in Science, or in Science and Art, either alone or in conjunction with subjects of general, commercial, manual, or technological instruction.

38.—(a) No student may be admitted to the course unless either (1) he has been educated for at least three years, subsequent to the age of 12, in a School or Schools on the List of Secondary Schools Recognised by the Board of Education as Efficient; or (2) he is over 16 years of age and is qualified from his general education to profit by a course of advanced instruction.

(b) For the present, students may be admitted between the ages of 15 and 16, but the attention of the Inspector must be specially drawn to such students.

(c) Courses in preparation for the Matriculation Examination of a University will not be recognised unless they are planned for students who are at least 18 years of age when they are admitted to the course.

(d) Courses in preparation for the Intermediate Examinations for a University Degree in Science other than Engineering will not be recognised unless they are planned for students who have qualified for Matriculation and are at least 17 years of age when admitted to the Course.

(e) The Board for the present are prepared to consider applications for the admission of individual students under 18 years of age to Matriculation Courses or students under 17 years of age, who have qualified for Matriculation, to Intermediate Courses in Science other than Engineering, provided that the circumstances of each such student can be shown to be exceptional, and provided also, in the case of a student who has been in attendance at a Secondary School, that the Board may decline to entertain the application if not submitted before the student leaves the Secondary School.

(f) Courses in preparation for the Intermediate Examination for a University Degree in Engineering may be recognised without the above limitations as to age, but must be confined to students who have qualified for Matriculation.

39.—(a) No attendance of less than one hour's duration may be registered for any student.

(b) The Board may, in special cases, accept for a Technical Institution Course, in place of the system of registration prescribed by them under Article 14 (a), a system submitted by the Managers in advance of the School Year in which it is to be applied, and approved by the Board.

40.—(a) A grant may be paid for each student who receives not less than 800 hours' instruction in the year in an approved course, at a rate not exceeding 10*l.* for the first year's course, 12*l.* for the second year's course, and 15*l.* for the third and succeeding years' courses.

(b) If a student receives less than 800 but not less than 600 hours' instruction in the year in an approved course, a grant may be paid at three-fourths of the rate mentioned in (a).

(c) The rate of grant will be determined in each case by the Board, and will depend upon the time allotted to instruction in Science and in Art, upon the cost of the necessary equipment, upon the character and efficiency of the instruction as a whole, the manner in which the students have benefited by it, and its suitability to the special circumstances of the locality.

(d) If a student attends an approved course of instruction regularly for a certain period, but is precluded from completing 600 hours' attendance owing to a change of residence or of conditions of employment or some similar cause, a grant may be paid at one-half the rate mentioned in (a), if he receives not less than 400 hours' instruction, or at one-quarter of this rate, if he received less than 400 but not less than 200 hours' instruction.

41.—(a) Where the organisation of a course permits, proposals may be made for students other than those in full-time attendance to take part-time courses, including certain subjects only of the complete course. The Board must be satisfied that the presence of part-time students does not interfere with the progress of full-time students, and as regards each individual part-time student that it is not necessary for him to take the full course, and that the subjects selected for him are suitable. If they are so satisfied, and if the 800 or 600 hours of instruction contemplated by Article 40 have not been received by such students, a grant may be paid

41.—(cont.)

at one-half the rate mentioned in Article 40 (a) for each such student receiving not less than 400 hours' instruction or at one-quarter of this rate for each such student receiving less than 400 but not less than 200 hours' instruction. *The Board may exceptionally make an allowance of grant for students attending part-time courses under this Article who have received less than 200 hours of instruction. The allowance will in no case be at a rate higher in proportion to the amount of instruction received than that mentioned in Article 40 (a).*

(b) Except as provided in Articles 40 (d) and 41 (a), no grant will be paid for any student receiving less than 600 hours' instruction in the year.

Day Technical Classes.

42.—(a) In special cases grants may be paid in respect of instruction of students in Day Technical Classes, whether detached classes for advanced work or grouped classes affording organised instruction in related subjects adapted to the technical requirements of the students. The grant on account of any single student will not exceed 40s., except in the case of attendances in excess of 200 hours for work higher in standard than that of the first year's course of a Technical Institution, or, in the case of attendances in excess of 400 hours in other approved courses; in these cases it may be increased up to 60s. The amount of the grant will be determined in each case by the Board, and will depend upon the number of hours of instruction received by registered students, on the cost of the necessary equipment, and upon the standard, character, and efficiency of the instruction and its suitability to the requirements of the students.

(b) The provisions of Article 38 (c)—(f) will apply also to Courses proposed for recognition under Article 42 (a).

(c) No new Schools of the types for which provision is made in *Part II. of these Regulations* (Junior Technical Schools) or in the Regulations for Schools of Nautical Training will receive grant under this Article. Any Schools of those types which are now recognised under this Article may continue to be so recognised, if the Managers desire, until the 31st July, 1915. After that

42.—(cont.)

date all such Schools must conform to the provisions of the appropriate Regulations if they are to receive grant from the Board.

43. Applications for recognition or continuance of recognition under Article 42 (a) must be made to the Board on the prescribed Forms, which should be *submitted to the Board by the date named on the Forms and in accordance with the directions given in them.*

CHAPTER 4.

CONDITIONS OF GRANT SPECIALLY APPLICABLE TO "SCHOOLS OF ART" AND "ART CLASSES."

44. An Institution giving organised courses of instruction, including advanced instruction, in Ornamental and Decorative Art, may be recognised as a "School of Art," and grants may be made to any institution so recognised under the regulations contained in Articles 45 to 52.

45. The work of a School of Art must be carried on methodically under a recognised Principal Teacher and an adequate staff in day and evening classes for not less than 36 weeks in the year. The arrangements for instruction and practice in the several subjects must be adequate. The day classes must meet for instruction on at least two days a week, and the evening classes on at least three evenings a week. The School must be open for instruction for not less than 14 hours each week, of which six at least must be in the daytime.

46.—(a) In order to be qualified for recognition as a Principal Teacher, a teacher must hold the Board's Teaching Certificate for Teachers of Art, or the Full Associateship of the Royal College of Art, or an Art Master's Certificate (Group I.), or, in exceptional circumstances, such special qualification as the Board may recognise.

(b) *The Full Associateship of the Royal College of Art will not be regarded as qualifying for recognition as a Principal Teacher a teacher whose Course at the College began in October, 1915, or later, unless such evidence of general education, physical fitness, and professional training has been produced to the Board, as is required*

46.—(cont.)

by paragraphs 2 to 4 of Rules 109, and the Diploma of Associateship has been endorsed by the Board with a Teaching Certificate under the terms of paragraph 5 of those Rules.

47. The premises must be approved by the Board for the purposes of a School of Art, and must not be used for other purposes without the previous sanction of the Board. The class-rooms must be adequate, and suitably arranged and equipped for elementary and advanced instruction and study in Drawing, Painting, Modelling, and Design, and for such work in Ornamental and Decorative Art, in Design for manufactures, and in Art Handicraft as may be useful in the locality.

48. Applications for recognition or continuance of recognition under Article 44 must be made to the Board on the prescribed Forms, which should be submitted to the Board by the date named on the Forms and in accordance with the directions given in them.

49. A Branch School of Art must be under the same Managers as the School of Art of which it is a Branch, and must be in the same district. It must have evening classes open three evenings a week for not less than 28 weeks in the year, and must be taught by a Teacher holding the Art Class Teacher's Certificate or a higher qualification and acting under the direction of the principal teacher of the School of Art, who must supervise the approved course of study and work to be followed at the Branch School.

Grant in respect of a Branch School of Art which is not recognised for the purposes of Article 51 (c) and (d) as a Preparatory Department will be payable on the conditions laid down in Article 32 (e).

50. Schools of Art must retain till the end of the Session, in a form convenient for inspection, Works executed or completed in the School by students during the Session. If all the Works of each student are not so retained, a sufficient selection must be filed to indicate his range of work and his progress in the course of the Session.

Fixed Annual Grant in respect of Schools of Art.

51.—(a) An inclusive annual grant will be made in respect of every School of Art, and will be assessed by

51—(cont.)

the Board after consideration of the volume, character, and merit of the work done in the School, and of the efficiency with which the work is organised and co-ordinated with that of other Schools and Classes in the locality.

(b) The grant will be made for the financial year extending from the 1st April to the 31st March, and the amount to be paid for each financial year will be announced to the School in advance of that year.

(c) The inclusive grant in respect of a School of Art may cover the work of a full-time or part-time Preparatory Department attached to the School.

(d) In assessing the grant to a School of Art the Board may take into account, in addition to the work done in subjects of Art—

- (i) instruction in subjects of general education forming part of the Course of a Preparatory Department; and
- (ii) instruction in literary or pedagogic subjects forming part of an organised Course specially approved by the Board for students of suitable types in the School of Art proper.

Grant in respect of Art Pupil-Teachers.

52. Subject to the conditions of the present Article, a grant not exceeding 15*l.* in respect of any one year may be made to the Managers of a School of Art or Branch School of Art for each Art Pupil-Teacher recognised at the School. This grant is intended to assist Managers in training young, deserving, and qualified students to become teachers of Art.

(a) The School of Art must have a teaching staff sufficient to carry on the work of instruction without the assistance of an Art Pupil-Teacher.

(b) One Pupil-Teacher may be recognised in a School which has at least 30 students in regular attendance. A second Pupil-Teacher may be recognised in a School which has at least 50 students in regular attendance, and, in exceptional cases, a third Pupil-Teacher in a School which has at least 200 students in regular attendance.

52.—(cont.)

(c) The recognition of a candidate as an Art Pupil-Teacher will be subject to the following conditions:—

- (i) The candidate must not be less than 17 or ordinarily more than 21 years of age on the 1st August in the year of his first appointment;
- (ii) The candidate must have received a preliminary general education satisfactory to the Board. This should, as a rule, have reached the standard represented by a Pass in the Preliminary Examination for the Elementary School Teacher's Certificate or in an Examination accepted as an equivalent thereto for the purposes of the new Teaching Certificate in Art (Rules 109). Where this condition is not satisfied the Board may exceptionally recognise the candidate as an Art Pupil-Teacher on condition that the Course provided for him includes some further subject or subjects of general study, but such acceptance will not necessarily involve ultimate acceptance of the Art Pupil-Teacher's general education for the purposes of the new Teaching Certificate;
- (iii) The candidate must have qualifications in Art satisfactory to the Board. For the present, the Board will be satisfied if the candidate—
 - (a) has passed the Board's Examination in Drawing or obtained First Classes in Freehand Drawing in Outline, Geometrical Drawing, and Model Drawing at the former Art Examinations; or
 - (β) has obtained First Classes in two of the subjects required for the Art Class Teacher's Certificate under the expired Regulations and also has secured the acceptance of two works for that Certificate; or
 - (γ) is satisfactorily reported upon by the Principal Teacher of the School of Art attended by him as to his attainments in Drawing, the probability of his being able ultimately to satisfy the technical requirements in Art for the new Art Teaching

52.—(cont.)

Certificate, and his aptitude for teaching, and submits as testimonies of study not less than three satisfactory exercises in each of the subjects mentioned in (a) above.

(iv) The candidate must declare his intention of taking up his Art Pupil-Teachership, if approved, with a view to his eventually becoming a Teacher of Art.

(d) The appointment of an Art Pupil-teacher is renewable from year to year, but will not ordinarily be extended beyond the close of the School Year in which he attains the age of 24 years

(e) A Pupil-Teacher must follow an approved Course of instruction and must, as a rule, attend the School of Art at which he is recognised, during at least 20 hours in each week for instruction in this Course and for practical training in the art of teaching. The Board may exceptionally approve other arrangements, but they will not ordinarily recognise as an Art Pupil-Teacher a person who is in other regular employment. The number of hours to be devoted to teaching practice in each year must not be less than 100 and not more than one-third of the total number of hours devoted to teaching and study taken together. All teaching done by an Art Pupil-Teacher must be under adequate supervision.

(f) Applications for recognition, or renewed recognition, of Art Pupil-Teachers must be made on the prescribed Forms, *which should be submitted to the Board by the date named on the forms and in accordance with the directions given in them.*

(g) Before renewing recognition of a Pupil-Teacher previously recognised the Board must be satisfied that the Art Pupil-Teacher has made due progress in his studies and his teaching. In this connection the Managers will be annually required to submit testimonies of study showing the range and character of the Art Pupil-Teacher's work during the year, together with a statement of the number of hours spent by him in teaching, and of the number devoted by him to study, and a report from the Principal Teacher of the School of Art as to his progress in his studies and his prospects of acquiring practical teaching capacity.

(h) An Art Pupil-Teachership is not tenable concurrently with a Local Scholarship awarded by the Board of Education or with a Local Art Exhibition.

52.—(cont.)

(i) The claim for grant under this Article must be supported in each case by the Managers' certificate of the amount paid by them to each Art Pupil-Teacher for the School year. The amount of the grant under this Article will not exceed the amount so paid.

53. (*Cancelled.*)

Art Classes.

54. An institution giving, in day or in day and evening meetings, an organised course of Art instruction, including advanced instruction in Ornamental and Decorative Art, in Design for Manufactures, or Art Handicraft, and meeting at least three times a week for not less than 28 weeks in the year, may be recognised as an "Art Class."

NOTE.—The three meetings required to qualify the class for recognition under this Article may not all be held on the same day.

The Teaching Staff must include a Teacher who is qualified under Article 46 of these Regulations, or who holds the Art Class Teacher's Certificate.

The grant in respect of a class so recognised will be payable on the conditions laid down in Article 32 (e).

Application for recognition or continuance of recognition under this Article should be made to the Board on the prescribed Forms, which should *be submitted to the Board by the date named on the Forms and in accordance with the directions given in them.*

CHAPTER 5.

ENDORSEMENT OF CERTIFICATES AND DIPLOMAS.

55.—(a) The Board are prepared to give special approval under the present Chapter to Schemes for the issue by Schools of Certificates in respect of Senior or Advanced Part-Time Grouped Courses, or of Diplomas in respect of Senior or Advanced Full-time Grouped Courses, and to endorse the Certificates or Diplomas issued to students who satisfactorily complete their Courses in accordance with the approved conditions.

(b) Endorsement will not be given in respect of Courses for the training of teachers or for the preparation of teachers as such for special Examinations, or in

55.—(cont.)

respect of Courses of which the principal aim is to prepare students for Matriculation Examinations or for University Degree or Diploma Examinations.

(c) The Board may for the present endorse Certificates or Diplomas issued in respect of Courses which in their earlier years did not completely fulfil the prescribed conditions, provided that the conditions are fulfilled as regards the last year of the Course. They may also continue to endorse Certificates issued under Schemes approved under Article 73 of the Regulations for Technical Schools 1909-10, but in no case will the Board endorse a Certificate under this Article for any student whose Course was begun later than the Session 1912-13.

56.—(a) Part-time Courses are classified for purposes of endorsement in accordance with Article 27 (d) of these Regulations.

(b) No Part-time Grouped Course will be approved under this Chapter unless it is carried on for at least 150 hours for each year, and if the instruction is given exclusively in Evening Classes the Course should, as a rule, be carried on for three evenings a week during the School session.

(c) A Senior Part-time Grouped Course should extend over at least two years.

(d) An Advanced Part-time Grouped Course will not be approved under this Chapter unless it extends over at least two years.

57.—(a) Full-time Courses are classified for the purposes of endorsement as follows :—

(i) Senior, if they are suitable for students who have attended a Secondary School up to the age of 15 or 16. A Senior Full-time Course must extend over two years.

(ii) Advanced, if they are suitable for students who have attended a Secondary School up to the age of 17 or 18, or for students who have been for two years in regular employment with concurrent attendance at Senior or Advanced Part-time Courses. An advanced Full-time Course should extend over at least two years.

57.—(cont.)

(b) Courses for Apprentices working under the system by which the student during alternate periods is under full-time instruction and in full-time employment are classified for the purpose of this Chapter as Full-time Courses, provided in each case that the amount of instruction given is equivalent to that provided in a continuous Full-time Course of two years' duration.

58. Before approving a Scheme the Board will require to be satisfied as to the equipment of the School for the purposes of the several Courses, the qualifications of the staff, the curriculum and syllabuses of instruction in the several subjects, and the steps to be taken to secure that students are not admitted to the Courses unless they are qualified to profit by them. The recognition of a School for grant under the preceding Chapters of these Regulations will not necessarily imply that the conditions in regard to equipment, staff, &c. are such as the Board can accept for the purposes of a Scheme of endorsed Certificates.

59. Particulars must be furnished indicating the several stages of the Courses at which internal Examinations will be held, and provision must be made for the holding in the final year of each Course of an Examination by the teachers in conjunction with an external Examiner or Assessor.

60. As a rule one Assessor only should be appointed for each Course, and if more than one is appointed for a Course, one of the number should be regarded as the Principal Assessor. Each person appointed as Assessor should, as a rule, possess not only technical or trade knowledge of the occupation to which the particular Course has reference, but also teaching experience in a Technical School. The names and qualifications of persons appointed as Assessors must be communicated for the information of the Board.

61. The Scheme must define the functions of the Assessors in relation to the preparation of the final tests, the marking of the worked exercises in the several tests, and the determination of the results of the final Examination as a whole. The Scheme must also provide that in case of any difference of opinion in regard to any of these matters, the decision of the Assessor, should he adhere to his opinion after discussion with the teacher

61.—(*cont.*)

or teachers, shall be conclusive. In case more than one Assessor acts for a Course, the final decision of points of doubt should rest with the Principal Assessor.

62. It will be a condition of the Board's approval of a Scheme that Certificates or Diplomas shall be issued only to those candidates who pass the prescribed Examinations. The further conditions of issue, *e.g.*, as to attendance, homework, laboratory work, drawings, &c., must be submitted for approval. The Board reserve the right to call for the worked papers and the testimonies of the studies of any student to whom the issue of a Certificate or Diploma is proposed and for any School records of his attendance, &c. They may withhold their endorsement if they are not satisfied that the prescribed conditions are satisfied.

63. It will be a condition of the approval of a Scheme that no Certificate or Diploma shall be issued to students who fail to satisfy the prescribed conditions; but a sessional record, stating the facts of a student's attendance at instruction and so forth, may be issued at the completion of each stage of the Course, and will not be regarded as contravening this condition.

64.—(*a*) A student must, as a rule, take the whole of the Course at the School issuing the Certificate, provided that in the case of a Senior Part-time Course different years of the Course may, with the previous approval of the Board, be assigned to different Schools which are co-ordinated for the purpose, and that in the case of a student who migrates from one area to another, equivalent instruction at another School accepted for the purpose by the Managers of the School issuing the Certificate and by the Board of Education may be regarded as taken in lieu of any part of the Course other than the last year.

(*b*) A Scheme for Diplomas must, as a rule, provide that the whole of the Senior or Advanced Full-time Course shall be taken at one Institution, but arrangements by which certain portions of the Course are assigned to different Institutions may be exceptionally approved.

65.—(*a*) The text of any proposed Certificate or Diploma must be approved by the Board.

65.—(cont.)

(b) Provision may be made for recording on Certificates successes in approved External Examinations; but successes in External Examinations may not, as a rule, be recorded on Diplomas.

(c) Successes at Internal Examinations may not be separately recorded on a Certificate or Diploma.

Endorsement of Full Technological Certificates.

66. For the present the Board will, on the application of the City and Guilds of London Institute, endorse Full Technological Certificates granted by the Institute under conditions approved by the Board.

PART II.

JUNIOR TECHNICAL SCHOOLS.

1. Day Schools, organised as part of the system of higher education, and providing a continued full-time education under school conditions for pupils from Elementary Schools in preparation either for artisan or other industrial employment or for domestic employment, will be recognised and, if efficient, aided with Grant by the Board, subject to the requirements laid down in *this Part of the Regulations*, and to the provisions of the *Preliminary Article* and of Chapter I. of *Part I. of the Regulations*, in so far as those provisions are not inconsistent with *this Part of the Regulations*. With the approval of the Board, industrial and domestic Courses may be provided in a single School.

2. —(a) The curriculum of a School recognised under these Regulations must provide for the continuance of the moral, intellectual, and physical education given in Public Elementary Schools. It must be suitable, as regards both the subjects and the methods of instruction, to the circumstances of the locality and the attainments and prospects of the pupils, and must provide for due continuity of instruction in each of the subjects taken, and for an adequate amount of time being given to each of these subjects. The Board may require modifications in the curriculum or the time-table if a subject is taught which is not of educational value, or if the time spent on particular subjects interferes with proper instruction in other subjects, or if the time given to any subject is insufficient to allow of effective progress being made in it, or for other similar reasons.

(b) The inclusion of languages, other than English or Welsh, in the curriculum will not be approved, unless such instruction can be shown to be of direct vocational value in connection with the occupations for which a preparation is provided.

(c) Practical work will be required in all suitable subjects, and must be of a progressive character throughout the Course.

(d) Visits of pupils to suitable works, museums, galleries, and other places connected with the subjects of their Courses, will be approved as part of the instruction.

3.—(a) Each Course must be organised to cover not less than two and not more than three years, to occupy the whole time of the pupils to the exclusion of any regular employment during six or nine terms, and to extend over not less than 36 weeks in each year.

(b) Where it is desired that technical instruction in preparation for an occupation shall alternate with practical experience of that occupation in works or elsewhere, a Course may, with the consent of the Board, be organised, with intervals between its terms, so as to provide for such alternation.

(c) The age-limits for the admission of pupils will be such as the Board may approve for each Course; but Schools should normally be planned to provide for pupils leaving the Elementary Schools at the age of 13 or 14 courses of instruction extending over two or three years up to the age of about 16. It is advisable that the Board should be consulted upon all proposals for Courses of less normal types at an early stage.

(d) A School will not as a rule be recognised, unless there is reason to anticipate the annual admission of a reasonable number of pupils.

4.—(a) Grant will be paid to the Responsible Body after the close of the school year on account of each pupil receiving regular and efficient instruction in accordance with an approved curriculum, at the rate of 3*l.* per annum for pupils under 13 on the day preceding the school year, and 5*l.* for older pupils. The amount of the grant may be increased to not more than 7*l.* in respect of Courses involving exceptionally costly methods of instruction.

(b) For the purpose of calculating the Grant, the number of pupils in each term during the school year will be taken, and the sum of these numbers divided by the number of terms will be the number on which Grant is payable.

(c) No pupil will be taken into account for the purposes of Grant whose attendance has not been registered at 80 per cent. of the meetings for his Course during the term, except in the case of absence owing to certified illness or risk of infection.

(d) No pupil who is regarded by the Board as unfit to continue in the Course or in the Class in which he is being taught will be taken into account for purposes of Grant.

4.—(cont.)

(e) No pupil will be taken into account for the purposes of grant for more than one term in excess of the number of terms of the approved Course.

(f) No Grant will be paid in respect of a closed School in excess of the net outstanding liabilities on the maintenance account, except in the case of a School for which the Responsible Body is a Local Authority.

5.—(a) As a rule, the instruction in each Course must be given during not less than 10 morning or afternoon meetings in each week of term, and must cover not less than 30 hours a week in all before the hour of 6 p.m.

(b) The arrangement of the school day and the provision for vacations must be approved by the Board as satisfactory.

(c) The conduct of the School must be such as to encourage a corporate life, and to afford opportunities for reasonable recreation, including, wherever possible, organised games.

6.—(a) No pupil may attend any secular instruction not forming part of the curriculum of the School, except with the approval of the Board.

(b) Arrangements, approved by the Board, must be made for testing the progress of the pupils; but no pupil may be allowed, without the express consent of the Board in advance, to enter for any examination in secular subjects other than one confined to pupils of the School.

(c) Every pupil admitted to the School must take the whole of one of the approved Courses, and no students, not being pupils of the School, may be instructed with the pupils.

(d) Pupils on admission must begin with the first year of the Course, except with the express sanction of the Board.

(e) The Board may disallow the admission or continued attendance of any pupil who is clearly unfit to proceed with the Course.

(f) Recognition may be withdrawn, if a reasonable number of pupils do not, year by year, remain to the end of the Course.

(g) No pupil may be admitted unless a certificate is given by his parent or guardian that he is intended to enter into employment for which the School provides

6.—(cont.)

a preparation. A record of the occupations actually followed by pupils leaving the School must be kept. A School will not continue to be recognised unless, as a rule, the pupils enter into employment for which the School provides a preparation.

(h) No pupil may be refused admission on other than reasonable grounds.

7. It is not desirable that the number of pupils in a Class under the supervision of a single teacher should exceed 32 for ordinary class-work, or 24 for work in which individual attention from the teacher is required, unless the teacher in charge of the class is provided with an assistant. The Board may, if they think fit, definitely require these limits not to be exceeded as regards any Class.

8. Educational responsibility for the School and financial responsibility for its maintenance, in so far as its expenses are not met out of grants and fees, must be undertaken by the same Responsible Body, which must be either a Local Authority exercising powers under Part II. of the Education Act, 1902, or a Joint Body formed by Local Authorities exercising such powers, or the Governing Body of a Charitable Foundation.

9.—(a) The School must be managed under and in accordance with a scheme or minute or body of written regulations which determines the constitution of any Governing or Advisory Body established for the School and defines the functions of any such Body and of the Head Master or Mistress of the School, and the Principal of any institution of which the School forms part, both as regards responsibility for general control and as regards immediate responsibility for the details of organisation, discipline, and teaching. The instrument of government must be approved by the Board, with whom a copy thereof as approved must be deposited, and its provisions must not be varied or departed from without the approval of the Board.

(b) The instrument of government should provide, whenever possible, for the appointment of an Advisory Body containing representatives of employers and employees connected with occupations for which the School furnishes a preparation.

10.—(a) The School must be conducted with the aid of an adequate and efficient teaching staff under a Head Master or Head Mistress, who may be a Head of Department, if the School forms part of a larger institution.

(b) A reasonable proportion of the members of the teaching staff must have had practical trade experience of the occupations for which the School furnishes a preparation.

(c) The teaching staff may not undertake any other duties which, in the opinion of the Responsible Body or of the Board, would interfere with the efficient discharge of their duties in the School. Its members should as a rule be solely employed in teaching, and should not be so employed for more than the equivalent of two morning, afternoon, or evening meetings in any one day, or of ten meetings in any week.

11.—(a) The premises must be sanitary, convenient for teaching purposes, reasonably quiet, and provided with adequate equipment and appliances for the approved curriculum of the School.

(b) Suitable facilities must be provided for recreation, physical exercises, and, wherever possible, organised games.

(c) If the School is held in the same building with any other day school or class, the teaching rooms assigned to it, with the exception of rooms which are specially equipped for instruction of a practical kind, must be separate. No room for practical instruction may be used in common by the pupils with those of any other school or class at the same time, unless special permission has been obtained in advance from the Board of Education.

(d) It is desirable that each Class in the School should have a room definitely assigned to it for all ordinary purposes.

(e) The plans of both site and buildings for new Schools, or for the enlargement of existing Schools, must be drawn in accordance with the Board's requirements, and must be submitted to the Board for approval. Such plans of existing buildings must be submitted as the Board may require in each case.

12.—(a) No aid will be given under these Regulations in respect of instruction in religious subjects.

12.—(cont.)

(b) A pupil shall not be required, as a condition of being admitted to or remaining in a School recognised under these Regulations, to attend or abstain from attending any Sunday school, place of religious worship, religious observances, or instruction in religious subjects in the School or elsewhere; and the times for religious worship or for any lesson on a religious subject shall be conveniently arranged for the purpose of allowing the withdrawal of any such pupil therefrom.

13. The School must not be conducted for private profit, or farmed out to any member or members of the teaching staff, and must be eligible from its character and financial position to receive aid from public funds.

14. The School may be with or without fees, but any scale of fees must be approved by the Board.

15.—(a) Application to the Board for placing a School on the list of Schools recognised for Grants under these Regulations must be made by the Responsible Body on a form of Preliminary Statement which will be supplied by the Board, and should be made as early as possible before the beginning of the first school year for which recognition is sought.

(b) The Board before granting the application will have regard to the suitability of the education to be provided by the School in view of the circumstances of the locality and the occupations for which it is intended to give a preparation, and to the relation of the School to other Schools and places of education available for the area; and where the Local Education Authority is not the Responsible Body, will consult the Local Education Authority.

(c) A Residential School will not, as a rule, be recognised unless it is recommended to the Board by the Local Education Authority as forming part of the public system of education for the area in which it is situated, and the Board are satisfied that the nature of the instruction provided entails residential conditions.

(d) Recognition, when given, will ordinarily be continued from year to year without a further application but may be withdrawn at any time by the Board.

(e) The school year will be held to begin on the 1st of August, unless some other date for an educational year has been fixed for the neighbouring Elementary

15.—(cont.)

Schools as a whole, or is specially approved by the Board.

(f) In special circumstances recognition may be given for an initial period of one or two terms, and a proportionate grant paid.

16. A full statement of the organisation and curriculum of the School must be submitted for the approval of the Board. When approval has once been given, the statement need not again be submitted so long as no alteration is required by the Board or desired by the Responsible Body.

17.—(a) Detailed time-tables of the work of the School must be forwarded in duplicate to the Board at the beginning of each school year. Instruction must be given in accordance with the approved time-table.

(b) Notice must be sent to the Inspector, as soon as is possible in each case, of every date on which the School will be closed or its ordinary work suspended.

(c) Cases of closure under order of a medical or sanitary authority, or for other unavoidable cause, must be notified to the Board, and due consideration will be given to these in determining whether the Regulations have been satisfied, and in the award of Grant.

18. A full account of the income and expenditure of the School must be furnished annually in such form as the Board may require. Except with the express approval of the Board in advance, all accounts must be made up to 31st March in each year.

19.—(a) The School, including the residential arrangements, if any, must be open at all reasonable times to inspection by the Board.

(b) All registers and other records prescribed by the Board must be regularly kept, and if required by the Board, through their Inspector or otherwise, must be submitted for inspection forthwith.

(c) All returns called for by the Board must be duly made.

(d) A copy of these Regulations, available for reference, must be kept at the School.

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PART III.

UNIVERSITY TUTORIAL CLASSES.

1.—(a) The Board of Education will be prepared to make special grants, subject to the requirements of *this Part of the Regulations* and of *the Preliminary Article and Articles 1 to 25 of Part I. of the Regulations*, so far as those provisions are not inconsistent with *this Part of the Regulations*, in aid of part-time Courses in subjects of general as distinct from vocational education, given under the educational supervision either of a University or University College, acting directly or through a Committee or Delegacy, or of an educational body containing representatives of a University or University College, and constituted expressly for such supervision.

(b) The University or supervising body must be responsible for the framing of the syllabus and the selection of a suitable tutor.

(c) The instruction must aim at reaching, within the limits of the subject covered, the standard of University work in Honours.

2. The Course must extend for each class over a period of not less than three years, and must occupy at least two hours a week for 24 weeks in each year, at least one half of the time being devoted to class work.

3.—(a) Arrangements must be made to the satisfaction of the Board for regulating the admission of students to each class, and for ensuring regularity of attendance and written work by the students.

(b) The number of original students admitted to any class for a Course beginning in 1914-15 or later must not exceed 32. In future years the Board may require the number of original students not to exceed 24.

(c) The roll of original students must be made up not later than the third meeting of the first year of the Course, and must be at once forwarded to the Board. For classes whose Course began before 1913-14 the Board will decide, after an inspection of the registers for the first year, which students are to be regarded as having been original students.

3.—(cont.)

(d) Added students, whose attendances will not be taken into account for purposes of grant, may be admitted after the roll has been closed, provided that the tutor is satisfied that they are able to take up the work at the stage which has been reached by the class, and that their admission does not bring the total number of original and added students on the register for any year of the Course to more than 24.

4. If a teacher conducts more than one class of this type, or conducts a class or classes in addition to other regular teaching work, the Board must be satisfied that he has adequate time available for the efficient conduct of the class.

5.—(a) Provided that the Regulations are satisfied and the instruction efficient, the Board will make a grant in respect of each class for each year of the Course, to the amount of 30*l.* or half the fee, exclusive of travelling and similar expenses, paid to the tutor, whichever may be the less, provided that the number of original students who attend not less than 66 per cent. of the meetings of the class during the year, and do such written work as may be required by the tutor, reaches not less than two-thirds of the total number of original students or 12 in all (whichever is the higher) for a class in its first year, half the number of original students or 9 in all for a class in its second year, and one-third of the number of original students or 6 in all for a class in its third or any later year.

(b) A proportionate reduction will be made from the full grant for each unit by which the number of original students in regular attendance falls below the number required of the class for the full grant.

(c) In order to be registered as in attendance at a meeting, a student must have arrived not more than 10 minutes after the beginning of the meeting and must have left not more than 10 minutes before the end of the meeting.

6.—(a) Grant will be paid by the Board to the University or other supervising body in respect of each class under its supervision, except that it may be paid to a Local Education Authority if the Authority takes full financial responsibility for a class and requests the grant to be so paid.

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(b) Every University or other supervising body will be required to furnish to the Board an annual statement of accounts in connection with tutorial classes, in a form prescribed by the Board.

7. The Board may make such additional grants as they may think fit in respect of vacation Courses for selected students organised in connection with classes aided under these Regulations.

8. *Grant for a Class whose Course began in or before 1912-13 will continue to be payable under Article 32 (d) of the Regulations for Technical Schools, 1910, unless the Supervising Body or the Authority elects to receive grant for the remainder of the Course under these Regulations.*

L. A. SELBY-BIGGE.

20th July, 1914.

Universities and Training and Examination of Teachers.

- Statement of Grants in aid of Technological and Professional Work in Universities [Cd. 6794.] Price 1d.; by post, 1½d.
- Regulations for Science Scholarships. Price 1d.; by post, 1½d.
- Prospectus of Whitworth Scholarships and Exhibitions. Price 1d.; by post, 1½d.
- Reports from Universities and University Colleges, 1911-12:—
- Vol. I. [Cd. 7008.] Price 2s.; by post, 2s. 4d.
- Vol. II. [Cd. 7009.] Price 1s. 10d.; by post, 2s. 2d.
- Report of Advisory Committee on distribution of Exchequer Grants to Universities, &c. [Cd. 6140.] Price 1½d.; by post, 2d. Second Report of ditto. [Cd. 6617.] Price 1d.; by post, 1½d. Third Report of ditto. [Cd. 6869.] Price 1½d.; by post, 2d.
- How to become a Teacher in a Public Elementary School. Price 4d.; by post, 5d.
- Regulations for the Training of Teachers for Elementary Schools, 1913. [Cd. 6795.] Price 6d.; by post, 8d.
- Regulations for the Training of Teachers of Domestic Subjects. [Cd. 4603.] Price 1½d.; by post, 2d.
- Regulations for Training of Teachers for Secondary Schools. [Cd. 6912.] Price 1d.; by post, 1½d.
- List of Training Colleges, &c. (Elementary), showing Accommodation, Fees, Courses, Examinations, and Accounts (List 175). Price 3d.; by post, 4½d.
- Syllabus of Preliminary Examination for Certificate, 1915. Price 1d.; by post, 1½d.
- Syllabuses of the Certificate Examinations, 1914 and 1915. Price 1d. each; by post, 1½d.
- Examination Papers set at the Preliminary Examination for the Elementary School Teachers' Certificate, 1913. Price 6d.; by post, 7d.
- Examination Papers set at the Certificate Examination, 1913. Price 6d.; by post, 7d.
- List of Persons who have passed the Preliminary Examination for the Elementary School Teachers' Certificate, 1913. [List 163, 1913.] Price 6d.; by post, 7d.
- List of Training College Students who completed training on 31st July 1913, and qualified by examination for recognition as Certificated Teachers, 1913. [List 177.] Price 6d.; by post, 9d.
- List of Persons who have passed the Certificate Examination of the Board of Education for Teachers in Elementary Schools, 1913. [List 165.] Price 6d.; by post, 7d.

Secondary Schools and Pupil-Teacher Centres.

- Regulations for Secondary Schools, from 1st August 1909. England [Cd. 4691]; Wales [Cd. 4696]. Price of either 2d.; by post, 3d.
- Regulations for the Preliminary Education of Elementary School Teachers, 1913. England [Cd. 7003]; Wales [Cd. 7005]. Price of either 2½d.; by post, 3½d.
- List of Efficient Secondary Schools and recognised Pupil-Teacher Centres in England [List 60]. Price 9d.; by post, 11d.
- Building Regulations for Secondary Schools and Pupil-Teacher Centres. [Cd. 3865.] Price 2d.; by post, 2½d.
- Report for 1912 under Welsh Intermediate Education Act. (H.C. 155; 1913.) Price 1½d.; by post, 2d.
- Report of Consultative Committee on Examinations in Secondary Schools, 1911. [Cd. 6004.] Price 2s. 6d.; by post, 2s. 11d.
- Report of Consultative Committee on Practical Work in Secondary Schools. [Cd. 6849.] Price 1s. 9d.; by post, 2s. 1d.
- Curriculum of Secondary Schools. [Circular 826.] Price 2d.; by post 3d.
- Teaching of English in Secondary Schools (Circular 753). Price 2d.; by post, 2½d.
- Pronunciation of Latin. [Circular 791 for England; or Wales, Circular 59.] Price of either 1d.; by post, 1½d.
- Teaching of Latin in Secondary Schools. [Circular 574, for England; or Wales, Circular 1.] Price 1d.; by post, 1½d.
- Teaching of History in Secondary Schools. [Circular 599.] Price 1d.; by post, 1½d.
- Teaching of Housecraft; Interim Memorandum. Price 4d.; by post, 5½d.
- Teaching of Modern Languages. [Circular 797.] Price 3d.; by post, 4d.
- Teaching of Needlework. [Circular 719.] Price 1d.; by post, 1½d.
- Memorandum on Physical Training in Secondary Schools. [Circular 779 for England; or Wales, Circular 40.] Price 2d.; by post, 2½d.

Technology, Evening Schools, and Higher Education in Science and Art.

- Regulations for Technical Schools, Schools of Art and other Forms of Provision of Further Education, from 1st August 1913. [Cd. 6925.] Price 2d.; by post, 3d.
- Regulations for Junior Technical Schools. [Cd. 6919.] Price 1d.; by post, 1½d.
- Regulations for University Tutorial Classes. [Cd. 6866.] Price ½d.; by post, 1d.
- Regulations for Schools of Nautical Training. [Cd. 6868.] Price ½d.; by post, 1d.
- Regulations and Syllabuses for Examinations in Science and Technology, 1914. (Rules 104.) Price 3d.; by post, 4½d.
- Regulations for Examinations in Art, 1914. (Rules 110.) Price 2d.; by post, 3d.
- Regulations for Scholarships, &c. in Art, 1914. Price 1d.; by post 1½d.
- Rules as to Certificates for Teachers of Art (Rules 109). Price 1d.; by post 1½d.
- List of Technical Instruction Courses and Day Technical Classes and (ii) Schools of Art and Art Classes, 1911-12-13. [List 111.] Price 3d.; by post, 4d.
- Prospectus of the Royal College of Art, 1913-14. Price 3d.; by post, 4d.

BOARD OF EDUCATION.

REGULATIONS
FOR
TECHNICAL SCHOOLS,
SCHOOLS OF ART,
AND OTHER FORMS OF PROVISION
OF FURTHER EDUCATION
IN
ENGLAND AND WALES.
(IN FORCE FROM 1ST AUGUST 1914.)

Presented to both Houses of Parliament by Command of His Majesty



LONDON:

PRINTED UNDER THE AUTHORITY OF HIS MAJESTY'S
STATIONERY OFFICE

BY EYRE AND SPOTTISWOODE, LTD., EAST HARDING STREET, E.C.
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BOARD OF EDUCATION.

SPECIAL REGULATIONS

for

Grants in aid of Instruction for Men
serving with the Colours.

(SUPPLEMENTARY TO THE REGULATIONS FOR TECHNICAL
SCHOOLS, &c., 1914-15.)

Presented to Parliament by Command of His Majesty.



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BOARD OF EDUCATION.

Special Regulations for Grants in aid of Instruction for Men serving with the Colours.

(SUPPLEMENTARY TO THE REGULATIONS FOR TECHNICAL
SCHOOLS, &c., 1914-15.)

1. Where the Local Education Authority desire, with the approval of the Military Authorities, to provide instruction, other than the normal instruction in military duties, for recruits and other men serving with the Colours, and are unable to secure regular attendance at progressive Courses occupying 20 hours or more and satisfying the full conditions of Chapter II. of the Board's Regulations for Technical Schools, &c., the Board may aid the provision of informal instruction in accordance with the following Regulations.

2. The instruction to be provided may consist, according to circumstances, of—

(a) Short Courses in—

- (i) Geography or History illustrative of the present campaign ;
- (ii) Topography, Mapping, and Map-reading ;
- (iii) "First Aid," Ambulance, and Hygiene ;
- (iv) Telephony and Telegraphy ;

(b) Conversation Classes in foreign languages ;

(c) Classes in Singing ;

(d) Classes in field Cookery ;

(e) Practical instruction in simple crafts, such as the mending of clothes or boots ;

(f) Illustrated lectures of a popular and instructive kind ;

(g) Tutorial assistance for backward students in the composition of letters and in simple calculations ;

or instruction in such other useful and interesting subjects as experience and the wishes of the students may suggest.

3. The Board will make Grants in aid of instruction given under these Regulations at the rate of from 2s. 6d. to 5s. for each hour of instruction, provided that the total Grant to a Local Education Authority for all the instruction provided in their area under these Regulations shall not exceed two-thirds of the cost of the instruction.

4. For the purposes of Article 3 the Board will estimate the cost of the instruction by adding to the ascertained cost of the salaries, fees, and out-of-pocket travelling and lodging expenses paid to organisers, teachers, and lecturers giving the instruction an allowance not exceeding 1s. 6d. for each hour of instruction given.

5. In assessing Grant, the Board may disregard any items of expenditure which, in their opinion, should not be taken into account for the purpose of the assessment.

6. A record of the periods of instruction given by each teacher, of the subjects, and of the number of students present during each period must be kept, but it will not be necessary, unless desired by the Authority, to register the attendance of individual students. A preliminary return must be made to the Board at the end of December showing the hours of instruction given up to that date.

7. The Preliminary Article and Articles 3, 7(a), 9, 15, 16, and 18(a) of the Regulations for Technical Schools, &c., will be applicable to instruction under these Regulations.

L. A. SELBY-BIGGE.

BOARD OF EDUCATION.

REGULATIONS

FOR

CERTAIN RESIDENTIAL COLLEGES

IN

ENGLAND AND WALES.

(IN FORCE FROM 1ST AUGUST 1914.)

Presented to both Houses of Parliament by Command of His Majesty.



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BOARD OF EDUCATION.

REGULATIONS FOR CERTAIN RESIDENTIAL COLLEGES.

1. A Residential Institution, not being a University College or constituent College of a University, which gives full-time instruction of University standard in Arts, Economics, or other non-vocational subjects, to adult students whose full-time education has been interrupted by industrial employment, may be recognised and, if efficient, aided with Grant by the Board, as a Local or Central College, subject to the requirements laid down in the present Regulations and in the Preliminary Article and Articles 1-24 of Part 1 of the Regulations for Technical Schools, &c., so far as not inconsistent with the present Regulations.

2. A College recognised under these Regulations will be required to provide at least one Full Time Course covering two years, but may also provide shorter Full Time Courses and Part Time Day and Evening Courses.

3. (a) The Courses provided may include the following:—

(i) Courses in preparation for a Diploma awarded by a University or by some other examining Body approved by the Board, for students regarded by the University or Body as qualified to enter upon such Courses.

(ii) College Courses which may, if desired, be in preparation for a Diploma to be awarded by the College.

(iii) Such Courses for students engaged in research as may be arranged with the approval of the Board.

(b) No student of less than 21 years of age may be admitted to a Full Time Course of any of the above types.

4. Educational responsibility for the College and financial responsibility for its maintenance, in so far as its expenses are not met out of grants and fees, must be undertaken by the same Responsible Body, which must be either a Local Authority exercising powers under Part II. of the Education Act, 1902, or a Joint Body formed by Local Authorities exercising such powers, or the Governing Body of a Charitable Foundation.

5. The College must be managed under and in accordance with a scheme or minute or body of written regulations which determines the constitution of any Governing or Advisory Body established for the College, or for any Department or Course thereof, and defines the functions of any such Body and of the Principal of the College and the Heads of Departments, both as regards responsibility for general control and as regards immediate responsibility for the details of organisation, discipline, and teaching. The instrument of government must be approved by the Board, with whom a copy thereof as approved must be deposited, and its provisions

must not be varied or departed from without the approval of the Board.

6.—(a) Application to the Board for recognition of an institution as a College must be made by the Responsible Body not less than three months before the beginning of the first school year for which recognition is desired.

(b) Recognition, when given, will ordinarily be continued from year to year without a further application, but may be withdrawn at any time by the Board.

7. A printed Prospectus for each school year must be submitted for the approval of the Board in the June of the previous school year, and when approved must be published for the information of the public. The Prospectus must contain the general regulations for the admission and certification of students and for the conduct of the College, and must show the Departments into which the College is organised, the subjects in which instruction will be given, the Courses normally available for students, and the dates between which instruction will be given during the coming year. The Prospectus must also contain a list of the regular staff of the College.

8. A printed Report must be furnished to the Board as soon as possible after the end of each school year, setting out the results of the year's work and showing the number of students who have been registered in each of the different Courses of instruction, and the number who have satisfactorily completed definite stages in their Courses. The Report must also include a summary of the Accounts submitted to the Board for the financial year last ended.

9. The College must be conducted under a responsible Principal, with the aid of a teaching staff sufficient in number and qualification for providing adequate instruction in each subject of the approved curriculum, except in so far as instruction by University teachers not forming part of the staff may be available.

10.—(a) A Grant will be made by the Board to the Responsible Body of each recognised College, in addition to any other grants payable under their Regulations, at a rate of from 6*l.* to 12*l.* for a year's work in respect of each student making satisfactory progress with an approved Full Time Course.

(b) In determining the rate of Grant the Board will have regard, *inter alia*, to (i) the cost, standard, and efficiency of the work as shown by inspection and by the Prospectus, Report and other returns, and (ii) the extent to which the teaching staff and the more advanced students are successful in promoting knowledge.

L. A. Selby-Bigge



BOARD OF EDUCATION.

REGULATIONS

FOR

SCHOOLS OF NAUTICAL TRAINING

IN

ENGLAND AND WALES.

(IN FORCE FROM 1ST AUGUST 1913.)

Presented to Parliament by Command of His Majesty.



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BOARD OF EDUCATION.

Regulations for Schools of Nautical Training.

1. Day Schools providing a continued full-time education under School conditions for pupils from Elementary Schools in preparation for employment at sea will be recognised and if efficient, aided with grant by the Board subject to the requirements laid down in the present Regulations.

2.—(a) The curriculum of a School recognised under these Regulations must provide for the continuance in a modified form of the education given in Public Elementary Schools including Physical Training. Provision must also be made for practical instruction of a progressive character in all suitable branches of Seamanship. If the School provides a preparation for the Royal Navy, instruction must be given in Squad Drill, which should be taught by a Naval Pensioner approved by the Board.

(b) Visits of pupils to suitable places connected with the subjects of their Course will be approved as part of their instruction.

3.—(a) A Course of Nautical Training must be organised to cover not less than one and not more than two years, to occupy not less than 40 weeks in each year.

(b) With the consent of the Board a period of practical experience on a sea-going tender under conditions of instruction approved by the Board may be accepted as part of a course of training under these Regulations.

(c) The age limits for the admission of pupils must be such as the Board may approve for each Course; but Schools should normally be planned to provide either a two-year Course for pupils aged between 13 and 14 on admission, or a shorter Course of at least one year's duration with a correspondingly later age of admission. It is advisable that the Board should be consulted upon all proposals for Courses of less normal types at an early stage.

4.—(a) The grant to the Responsible Body for each pupil who completes the approved Course will be proportionate to the length of the Course, and at the rate of 10*l.* per year.

(b) If the approved Course lasts for more than a year the Board may pay a proportionate part of the grant for pupils who have been in residence in the School and in regular attendance at the Course for less than its full duration, but no grant will be payable for any pupil who has been in attendance at the Course for less than one year.

(c) No pupil will be taken into account for the purposes of grant for any longer period than that of the approved Course.

(d) No pupil can be regarded as entering upon the approved Course, or as beginning to satisfy any of the conditions of grant, before reaching the age of 13 years.

(e) The Board will make special arrangements for grant in respect of those pupils in attendance after the date from which the School is recognised under these Regulations, who were also in attendance before that date.

(f) No grant will be paid in respect of a closed School in excess of the net outstanding liabilities on the maintenance account, except in the case of a School for which the Responsible Body is a Local Authority.

(g) The grant must be expended to the satisfaction of the Board.

5.—(a) A general Time Table must be submitted for the approval of the Board, showing the daily routine of the Institution, and clearly indicating the periods during which the pupils receive instruction in each subject of the approved curriculum. The Time Table will not be approved unless it provides for an adequate amount of instruction in the subjects of the approved curriculum to be normally given in each week before 6 p.m. In the case of a ship reasonable account will be taken of the training involved in the performance of necessary ship's duties.

(b) The provision for vacations must be such as the Board can accept as satisfactory.

(c) The conduct of the School must be such as to encourage a corporate life, and to afford opportunities for reasonable recreation.

6.—(a) Arrangements approved by the Board must be made for testing the progress of the pupils.

(b) Every pupil admitted to the School must regularly attend the full course of instruction, and no boys not being pupils of the School of Nautical Training may be instructed with such pupils.

(c) Recognition may be withdrawn if a reasonable number of pupils do not year by year remain to the end of the Course.

(d) No pupil may be admitted unless a certificate is given by his parent or guardian that he is intended for the sea. An indenture of apprenticeship will be accepted as equivalent to a certificate.

(e) No pupil may be admitted to the Course unless a certificate has been given by the Medical Officer of the School in a form approved by the Board that he is physically fit for employment at sea.

(f) A record must be kept of the employment of pupils during a period of three years after leaving the School. The

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Board may withdraw recognition from a School if they are not satisfied that a reasonable proportion of the pupils go to sea and continue in that employment for a satisfactory period.

7. The number of pupils in a class under the supervision of a single teacher should not exceed 32 for ordinary class work.

8. Educational responsibility for the School and financial responsibility for its maintenance, in so far as its expenses are not met out of grants and fees, must be undertaken by the same Responsible Body, which must be either a Local Authority exercising powers under Part II. of the Education Act, 1902, or a Joint Body formed by Local Authorities exercising such powers, or the Governing Body of a Charitable Foundation.

9.—(a) The School must be managed under and in accordance with a Scheme or Minute or body of written Regulations which determines the constitution of any Governing or Advisory Body established for the School, and defines the functions of any such Body and of the Superintendent of the School. The Instrument of Government must be approved by the Board, with whom a copy thereof as approved must be deposited, and its provisions must not be varied or departed from without the approval of the Board.

(b) The Instrument of Government must provide, unless the Governing Body already contains persons having a close practical acquaintance with the conditions of employment at sea, for the appointment of an Advisory Body containing such persons.

10.—(a) The School must be conducted with the aid of an efficient teaching staff which is adequate for conducting the instruction provided in the approved curriculum.

(b) A reasonable proportion of the members of the teaching staff must have had practical experience of employment at sea.

11.—(a) The premises must be sanitary, convenient for teaching purposes, and provided with adequate equipment and appliances for the approved curriculum of the School.

(b) Suitable facilities must be provided for recreation and physical exercises.

(c) It is desirable that a School of Nautical Training should have its own separate premises. If this condition is not satisfied the arrangements as to the use of the premises by the School recognised under these Regulations and by any other School or Department must be submitted in detail for the approval of the Board.

(d) The plans of premises for new Schools or for increased accommodation for existing Schools must be submitted to the Board for approval. Such particulars of existing premises must be submitted as the Board may require in each case.

12.—(a) No aid will be given under these Regulations in respect of instruction in religious subjects.

(b) A pupil shall not be required, as a condition of being admitted to or remaining in a School recognised under these Regulations, to attend or abstain from attending any Sunday school, place of religious worship, religious observances, or instruction in religious subjects in the School or elsewhere; and the times for religious worship or for any lesson on a religious subject shall be conveniently arranged for the purpose of allowing the withdrawal of any such pupil therefrom at the instance of his parent or guardian.

13.—(a) The School must not be conducted for private profit or farmed out to any member or members of the teaching staff, and must be eligible from its character and financial position to receive aid from public funds.

(b) The Board must be satisfied that the School is not unnecessary, having regard to the existing supply of Schools of the same type.

14. The School may be with or without fees, but any scale of fees must be approved by the Board.

15.—(a) Application to the Board for placing a School on the list of Schools recognised for grants under these Regulations must be made by the Responsible Body on a form of preliminary statement which will be supplied by the Board.

(b) Recognition, when given, will ordinarily be continued from year to year without a further application, but may be withdrawn at any time by the Board.

(c) The date from which recognition will be held to begin will be the 1st August unless some other date is specially approved by the Board.

16. A full statement of the organisation and curriculum of the School must be submitted for the approval of the Board. When approval has once been given the statement need not again be submitted so long as no alteration is required by the Board or desired by the Responsible Body.

17.—(a) Instruction must be given in accordance with the approved time-table, which must not be permanently altered without the approval of the Board. Whenever possible previous notice of temporary deviations should be sent to the Inspector.

(b) Notice must be sent to the Inspector, as soon as is possible in each case, of every date on which the School will be closed or its ordinary work suspended.

(c) Cases of closure under order of a medical or sanitary authority, or for other unavoidable cause, must be notified to the Board, and due consideration will be given to these in determining whether the Regulations have been satisfied, and in the award of grant.

18. A full account of the income and expenditure of the School must be furnished annually in such form as the Board

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may require. Except with the express approval of the Board in advance, all accounts must be made up to 31st March in each year.

19.—(a) The School, including the arrangements for boarding and lodging, must be open at all reasonable times to inspection by the Board.

(b) All registers and other records prescribed by the Board must be regularly kept, and, if required by the Board through their Inspector or otherwise, must be submitted for inspection forthwith.

(c) All returns called for by the Board must be duly made.

(d) A copy of these Regulations, available for reference, must be kept at the School.

20.—(a) If any of the conditions of award of grant are not fulfilled the Board may withhold the grant, or, if they think fit, pay it with or without deductions, and may warn the Managers that a grant will not again be paid in similar circumstances.

(b) The decision of the Board as to whether the conditions have been fulfilled in any case, or as to the application or interpretation of these Regulations, is conclusive.

L. A. SELBY-BIGGE.

19th June 1913.

BOARD OF EDUCATION.

**REGULATIONS AND SYLLABUSES
FOR EXAMINATIONS IN
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Syllabuses upon which General Examinations in Science and Technology and Competitive Examinations for Awards in Science will be held in 1915.

(N.B.—In Coal Mining, General Examinations only are held.)

GROUP A. PURE AND APPLIED MATHEMATICS.

1.	Practical Geometry and Graphics - - - - -	13
2.	Pure Mathematics - - - - -	16
3.	Practical Mathematics - - - - -	18
4.	Theoretical Mechanics (Solids) - - - - -	22
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GROUP B. ENGINEERING.

6.	Machine Construction and Drawing - - - - -	24
7.	Applied Mechanics (Materials and Structures) - - - - -	28
8.	Applied Mechanics (Machines and Hydraulics) - - - - -	28
9.	Heat Engines - - - - -	31
10.	Building Construction - - - - -	35
11.	Naval Architecture - - - - -	37

GROUP C. PHYSICS.

12.	Heat - - - - -	40
13.	Magnetism and Electricity - - - - -	41

GROUP D. CHEMISTRY.

14.	Inorganic Chemistry - - - - -	42
15.	Organic Chemistry - - - - -	45

GROUP E. COAL MINING AND METALLURGY.

16.	Coal Mining - - - - -	47
17.	Metallurgy - - - - -	49

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Syllabuses upon which Competitive Examinations for Awards in Science, but not General Examinations, will be held in 1915.

	PAGE
Sound and Light - - - - -	55
Practical Inorganic Chemistry - - - - -	56
Practical Organic Chemistry - - - - -	57
Practical Metallurgy - - - - -	58
General Biology - - - - -	62
Human Physiology - - - - -	64
Zoology - - - - -	68
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PREFATORY NOTE.

1. The Board have had under careful consideration the question of the future of their Examinations in Science and Technology, and have carefully considered the views expressed on the subject by several representative Educational and Administrative Bodies directly interested in the Examinations. The Board have for some time felt considerable doubt as to the value of these Examinations as tests of the progress of students, which would in their opinion be better tested by Internal Examinations carefully adjusted to the character and conditions of the instruction given in the individual schools. Although the Board will hold Lower and Higher Examinations as usual in 1915, it is their intention to discontinue the Examinations at a date which will be subsequently announced, and of which full notice will be given.

2. The present volume of Regulations and Syllabuses for Examinations in Science and Technology, 1915, continues without any substantial change the Regulations and Syllabuses for the Examinations in Science and Technology, 1914.

3. The Regulations as to the subjects of the Examinations, as to the eligibility of candidates to be admitted to the General Examinations, and as to fees, result lists, certificates, &c., are given in the first ten sections. The remaining sections contain a statement of the local arrangements which must be made where the examinations are desired.

4. The Syllabuses printed after the Regulations in this volume are those upon which the Examinations in subjects of Science and Technology to be held by the Board in 1915 will be based. It was announced in paragraph 14 of the Appendix to Circular 776 that the Examinations to be held in 1913 for the purpose of determining the awards in Science, namely, Royal Scholarships and Free Studentships and Sir Joseph Whitworth's Scholarships and Exhibitions, would be of standards corresponding to those of the reorganised General Examinations, and that, so far as provision was not made by that system for Examinations in all the subjects prescribed in the Regulations for these awards, special Examinations, of standards corresponding to those of the General Examinations, would be held. It has been decided to continue this arrangement for 1915.

5. The Syllabuses thus fall into two groups. The first group includes the Syllabuses of subjects in which the Board hold General Examinations. As the various subjects which may be offered by competitors for awards in Science

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include all the subjects, except Coal Mining, in which General Examinations are held, these Syllabuses, with the exception named, will also serve for the purposes of the competitions. The second group includes the Syllabuses of subjects which may be offered by competitors for awards in Science but in which there is no General Examination. Examinations in these subjects will be held for competitors for awards and for no other candidates. In each of the subjects for which a Syllabus is given, except General Biology and Freehand Drawing, a Lower and a Higher Examination will be held; in each of the two subjects just mentioned there will be only one Examination.

6. On the advice of the Examiners a slight addition has been made to the Syllabus of the Lower Examination in Practical Metallurgy, so as to include certain assays appropriate to that stage. The Table of Useful Constants has been brought up to date.

7. The Time Tables of the Examinations to be held in 1915, with certain instructions for the information of candidates, are printed at the end of this volume.

L. A. Selby-Biggs

21 Sept., 1914.

REGULATIONS FOR EXAMINATIONS IN SCIENCE AND TECHNOLOGY, 1915.

General Examinations in Science and Technology.

1.—(a) General Examinations in Science and Technology will be held in 1915 in the subjects stated below. The Examinations in the several subjects are separate and independent, but the subjects are grouped* for the purpose of constituting Examining Committees dealing with related subjects.

Group A.—Pure and Applied Mathematics.

1. Practical Geometry and Graphics.
2. Pure Mathematics.
3. Practical Mathematics.
4. Theoretical Mechanics (Solids).
5. Theoretical Mechanics (Fluids).

Group B.—Engineering.

6. Machine Construction and Drawing.
7. Applied Mechanics (Materials and Structures).
8. Applied Mechanics (Machines and Hydraulics).
9. Heat Engines.
10. Building Construction.
11. Naval Architecture.

Group C.—Physics.

12. Heat.
13. Magnetism and Electricity.

Group D.—Chemistry.

14. Inorganic Chemistry.
15. Organic Chemistry.

Group E.—Coal Mining and Metallurgy.

16. Coal Mining.
17. Metallurgy.

(b) In each subject there is a Lower Examination and a Higher Examination.

* This grouping has no connection with the grouping of subjects for the purposes of the Competitions for Royal Scholarships and Free Studentships in Science.

1—*cont.*

(c) The Examinations will be based upon the Syllabuses which follow these Regulations (*see* pages 13 to 54).

(d) The Time Table of these Examinations, with certain instructions relating to them, is printed on pages 81 to 83. This Time Table has already been separately issued (Form 600 T).

Qualifying Test for admission to the Competition for Royal Scholarships, &c.

2.—(a) In the following subjects—

English,
Mathematics,
Mechanics (Solids and Fluids),
Chemistry,
Sound, Light and Heat,
Magnetism and Electricity,
Freehand Drawing,

it may be necessary to hold Qualifying Examinations for intending competitors for Royal Scholarships and Free Studentships. (*See* paragraphs 4 and 6 of the Regulations for Scholarships, Exhibitions, &c., in Science, 1915.) The Time Table of these Examinations, with certain instructions relating to them, is printed on page 81.

(b) The Qualifying Examinations so far as they may be required will be held under the special arrangements detailed in paragraph 11.

Competitive Examinations for Royal Scholarships, &c.

3.—(a) For the purpose of determining the awards of Royal Scholarships and Free Studentships in Science and Sir Joseph Whitworth's Scholarships and Exhibitions, Competitive Examinations will be held, so far as may be required, in the subjects (except Coal Mining) in which General Examinations are held, and in the following subjects in which no General Examinations are held :—

Sound and Light.
Practical Inorganic Chemistry.
Practical Organic Chemistry.
Practical Metallurgy.
General Biology.
Human Physiology.
Zoology.
Botany.
Geology.
Mineralogy.
Freehand Drawing.

3—cont.

(b) A competitor who offers a subject in which a General Examination is also held will take a paper identical with that set for the Lower or Higher General Examinations, as the case may be. In the subjects enumerated in (a) above there will be a Lower Examination and a Higher Examination, except in the case of General Biology and Freehand Drawing, in each of which subjects one Examination only will be held. The Syllabuses upon which the Examinations will be based are those contained in this volume.

(c) Competitors for Royal Scholarships, Free Studentships (Science), Whitworth Scholarships or Exhibitions, or Local Science Exhibitions, who take the Higher Examinations for the purposes of the Competitions will be required, in all subjects except Practical Geometry and Graphics, Pure Mathematics, Practical Mathematics, Theoretical Mechanics (Solids and Fluids), Machine Construction and Drawing, Building Construction and Naval Architecture, to submit their laboratory note-books, signed and certified by their teachers, for inspection.

(d) The Time Table of these Examinations, with certain instructions relating to them, is printed on pages 83 to 85.

4. Reference should be made to the separately published "Regulations for Scholarships, Exhibitions, &c., in Science for the year 1915," and to the "Prospectus of Sir Joseph Whitworth's Scholarships and Exhibitions for Mechanical Science (43rd edition)," for particulars of the Competitions and for a statement of the conditions under which candidates are admitted to them.

Regulations applicable only to the General Examinations.

5. The following Regulations as to the eligibility of candidates for admission to the Examinations, fees, result lists, certificates, &c., are applicable only to the General Examinations, and, except in the cases specially provided for, do not affect candidates who are only taking the subjects of a General Examination as competitors for a Scholarship or other award in Science.

6.—(a) The General Examinations in Science and Technology are intended for Students who have been registered during the school year in which the Examinations fall in Part-Time or Short Full-Time Courses recognised under the Board's Regulations for Technical Schools, &c.

(b) Students may not attend these Examinations, except with the express approval of the Board obtained beforehand, if they have been registered during the school or academic year in which the Examination falls in Full-Time Courses

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6.—(b)—*cont.*

covering more than a year at an Institution recognised under the Board's Regulations for Technical Schools, &c., or in any Courses recognised under the Statement of Grants available in aid of Technological or Professional work in Universities or in other University Degree or Diploma Courses.

(c) Other persons, if eligible under the conditions stated below, will be accepted as candidates at the General Examinations, provided that in the case of Pupil-Teachers, Pupils in Preparatory Classes, Student-Teachers, Students in Training as intending Teachers in Elementary Schools, and Students in Training as intending Teachers of Domestic subjects, the express approval of the Board has been obtained beforehand.

7. No candidate will be eligible for admission to the General Examinations in 1915 who will not be over 17 years of age on the 31st July 1915.*

8.—(a) A fee of 3s. 6d. is payable for each examination applied for in each stage of each subject.

(b) A competitor for an award under the Regulations for Scholarships, &c., in Science, 1915, who offers in the Competition a subject in which a General Examination is held will not be accepted also as a candidate in the General Examination in the subject unless he satisfies all the conditions, including the payment of the fee of 3s. 6d.

9. Candidates taking the Higher Examinations in any of the following subjects, viz. :—

Applied Mechanics (Materials and Structures),
Applied Mechanics (Machines and Hydraulics),
Heat Engines,
Heat,
Magnetism and Electricity,
Inorganic Chemistry,
Organic Chemistry,
Metallurgy,

will be required to furnish a certificate of having completed a satisfactory amount of laboratory work, and to submit for inspection his laboratory note-books, signed and certified by the teacher: account will be taken of these in determining the results of the examinations.

10.—(a) The Board will issue Result Lists of the Examinations. There will be no classification of the successful candidates in the Lower Examinations, but candi-

* For the purpose of these Regulations a person is considered to complete each year of age immediately on the commencement of a birthday. Thus a person born on July 31st, 1898, is over 17 years of age on July 31st, 1915, and is qualified, therefore, for admission to the Examination; but a person born on August 1st, 1898, is not.

10.—(a)—*cont.*

dates who are successful in a Higher Examination will be classed as (i) having passed the Examination, or (ii) having passed the Examination with distinction.

(b) No result will be announced for a competitor who takes a Scholarship Examination identical with a Lower or Higher General Examination unless he has satisfied all the conditions of admission to the General Examination, including the payment of the fee of 3s. 6d.

(c) Candidates who pass the Lower Examination in Coal Mining in 1915 will receive Certificates, but no Certificates will be issued to candidates who pass the Lower Examination in other subjects. Candidates who pass the Higher Examinations held in 1915 will receive Certificates.

(d) Except as provided in the Regulations for Scholarships, &c., in Science, 1915, the General Examinations will only be available for the determination of the awards of Scholarships, Prizes, &c., if the following conditions are satisfied:—

- (i) The scheme of the Competition must be submitted to the Board not later than the 1st of May and must be approved by them.
- (ii) The promoters of the Competition must undertake to meet the expenses of a special revision of the exercises worked in the Competition.
- (iii) The scheme must not provide for the determination of the awards partly upon the work done by the competitors at the Board's Examinations in Science and Technology and partly upon their work at other Examinations.
- (iv) No information can be furnished by the Board other than the statement of the order or orders of merit in which the candidates are placed after such revision of their exercises worked at the Board's Examinations as may be necessary. In no circumstances can the marks obtained by candidates, or any information as to their marks, be communicated.

Special Arrangements as to Qualifying Test and Examination in Freehand Drawing.

11.—(a) As soon as possible after the receipt of the forms of application for admission to the competitions for Royal Scholarships and Free Studentships in Science, the Board will inform applicants whether they are required to undergo a qualifying test, and, if so, in what subject or subjects,

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and, further, as to the arrangements which the Managers or Local Education Authority, as may be most convenient, are prepared to make for the holding of the requisite test which will take place from the 1st to the 9th of March.

(b) Arrangements similar to those mentioned in the previous paragraph will apply to those competitors for the Whitworth Scholarships and Exhibitions who indicate on their forms of application for admission to the Competition that they desire to take the Examination in Freehand Drawing to be held on the 1st March, and the Examinations in Mechanics to be held on the 3rd and 4th of March.

(c) The Board will communicate with the Managers or the Local Education Authority as may be convenient as to the holding of these Examinations where they appear to be required.

Local Management of General and Competitive Scholarship Examinations.

12. The General Examinations in Science and Technology, and the Competitive Examinations for Scholarships, &c. (except the Freehand Drawing Examination in the Whitworth Competition) will, as regards local management, be held under the following regulations.

13. For the local management of the Examinations mentioned in paragraph 12 the Board recognise either—

(a) The Local Education Authority for Higher Education, who, subject to these regulations, may appoint a Special Local Secretary to undertake the arrangements for the Examinations; or

(b) Managers of Schools or Classes.

Special Local Secretaries and Assistants.

14.—(a) Where numerous Examinations have to be held and the number of papers to be applied for is considerable, the Board may approve the appointment of a Special Local Secretary to undertake the arrangements for the Examinations.

(b) Application for approval of the appointment of a Special Local Secretary must be made to the Board by the Local Education Authority by letter not later than the 31st January, and in cases in which the application is granted the name of the person they propose to appoint must be submitted to the Board for approval not later than the 14th February.

14—cont.

(c) Assistants may be appointed by the Local Education Authority to act as Superintendents at the Examinations. The names of the persons proposed for appointment as Assistants must be submitted for the Board's approval, with such information as the Board may require for the purpose of satisfying themselves that such persons are qualified by their position or occupation to perform the duties of this office satisfactorily.

(d) Candidates for examination, their relatives, their teachers, or other persons who have a direct interest in the success of a candidate, are ineligible to act as Special Local Secretaries or Assistants for the district in which the candidates are to be examined.

(e) After a Special Local Secretary has been appointed, the Board will, as a rule, correspond with him alone on all subjects connected with the Examinations. He must arrange for holding the Examinations at convenient Centres, subject to the approval of the Board, the number of these Centres being as few as possible. As he is charged with the general supervision of the Examinations, he may not, except in an emergency, act in the place of an Assistant on any occasion on which there is an Examination at more than one Centre.

(f) The Special Local Secretary must forward to the Board, not later than the 1st of April, his proposed arrangements for the Examinations, with a requisition for papers, together with the necessary fees. The Special Local Secretary should refuse to provide accommodation for any candidate in respect of whom application has not been made by the prescribed dates (*see* paragraphs 18 (a) and 20 (a)).

15.—(a) The Special Local Secretary will be entitled to payment for the services of himself and the Assistants from a fund to which the Board will contribute after receiving a certificate on the prescribed form. This contribution will be one-half the total sum payable at the rates set out below to the Special Local Secretary and the Assistants necessarily employed under paragraphs 24, 25, and 26, or two shillings and sixpence for each exercise worked at the Examinations, whichever is the less.

(b) The financial arrangements of the Examinations are, subject to the Regulations of the Board, entirely under the control of the Local Education Authority, to which body the Special Local Secretary is required to submit his accounts. Each School having students for examination may be required, if the Local Education Authority think fit, to pay a contribution prior to the time of the Examination; the students

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15.—(b)—*cont.*

of any School from which such contribution has been so required, but has not been received, may be excluded from the Examination. The Special Local Secretary shall account to the Authority for any payments received from the Schools, or from candidates (*see* paragraph 20 (c)). Any such payments must be applied towards providing the amount required from the locality for examination expenses to meet the grant given by the Board.

(c) The Special Local Secretary is allowed a fee of half a guinea for each afternoon or evening on which an Examination is held in his district, and is also allowed a fee of half a guinea for every 75 exercises worked at the Examinations. When he acts in place of an Assistant he will receive no additional fee for so acting.

(d) For attendance throughout an Examination not exceeding four hours each Assistant is allowed a fee of half a guinea. Where that period is exceeded, an additional fee of three shillings and sixpence for each additional hour or fraction of an hour is allowed up to a maximum total fee of one guinea.

Managers of Schools and Classes.

16.—(a) Where no Special Local Secretary is appointed, the management of Examinations devolves upon the Managers of the School or Class requiring Examination, and the Board will recognise their Correspondent as Examination Secretary. The Examinations must be superintended by persons approved by the Board for the purpose. Candidates for examination, their relatives, their teachers, or other persons who have a direct interest in the success of a candidate, are ineligible to act as Examination Secretaries or Superintendents of Examinations.

(b) Where two or more Schools or Classes, within reasonable distance of one another, require simultaneous examination, the Board may call upon their Managers to appoint one of themselves as the Examination Secretary, and he must make arrangements for the Examination in question to be held at a common centre.

(c) Except as provided by paragraph 17, no payment is made by the Board in aid of the management or conduct of any Examination to which this regulation applies.

Special Paid Superintendents.

17.—(a) Subject to the provisions of this paragraph, the Board may recognise as Special Paid Superintendents approved persons appointed by the Local Education

17.—(a)—*cont.*

Authority to superintend Examinations for which no Special Local Secretary is appointed.

(b) Special Paid Superintendents will be entitled to payment at the rates allowed for Assistants to Special Local Secretaries, and will be subject to the regulations for such Assistants. A contribution will be made by the Board in these cases under the conditions laid down in paragraph 15 so far as applicable.

Application for Examination Papers and Payment of Fees.

18.—(a) Managers must apply on the prescribed form and not later than the 25th of March, for Examination Papers. This application must be made to the Special Local Secretary, where one has been appointed, and in other cases to the Board.

(b) Managers are responsible for satisfying themselves that each person in respect of whom General Examination Papers are applied for is eligible under the Regulations for such Examinations.

(c) The application for Scholarship Examination Papers, if any are required, must be made at the same time and must relate only to persons who are competitors for an Award under the Regulations for Scholarships, Exhibitions, &c. in Science, 1915.

(d) The Board cannot undertake to entertain late or irregular applications.

(e) The application for papers must be accompanied by a remittance covering the amount of fees payable to the Board, viz. :—

3s. 6d. for each Examination applied for on behalf of each candidate at the General Examinations in Science and Technology.

(f) No fees are payable to the Board in respect of papers applied for on behalf of a registered competitor for an award under the Regulations for Scholarships, &c. in Science, 1915, except in so far as the competitor—

(i) takes subjects in which a General Examination is held ; and

(ii) is a candidate at the General Examination in one or more of those subjects.

19. Where application is made for the examination of less than four candidates in one place, the Board may require the candidates to go to a neighbouring centre.

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Admission of Candidates and Local Charges.

20. When it has been arranged to hold an Examination persons eligible to attend it are entitled to be admitted subject to the following conditions, and provided there is accommodation available :—

- (a) Applications made later than the 21st March may be rejected.
- (b) The applicant must satisfy the Special Local Secretary or the Managers that he is eligible to attend the General Examinations or that he offers the subject of the Examination as a competitor for an Award under the Regulations for Scholarships, Exhibitions, &c. in Science, 1915.
- (c) If the Local Education Authority think fit in the case of an Examination for which a Special Local Secretary or a Special Paid Superintendent has been appointed, or if the Managers think fit in other cases, the applicant may be required, in addition to paying any Examination fee payable to the Board, to contribute towards the local expenses of the Examination.
- (d) The contribution required may not exceed 5s. if the Examination is in Practical Chemistry or Practical Metallurgy, and may not exceed 2s. 6d. in other cases.

Submission of Certificates of Laboratory Work and Note-books.

21. Arrangements must be made by Special Local Secretaries or Managers for the collection and submission in accordance with instructions which will be given in due course of the testimonies of study (certificates of laboratory work and laboratory note-books) required to be furnished by candidates in certain subjects of the Higher Examinations under paragraphs 3 (c) and 9 of these Regulations.

Examination Arrangements.

22.—(a) The Examination Papers will be forwarded to the Special Local Secretary, or to the Examination Secretary, as the case may be, who will be responsible for their safe custody and distribution. The packets of Examination Papers must not in any circumstances be permitted to pass

22.—(a)—cont.

into the hands of a teacher, or of a candidate for examination, or of any other person interested in the success of a candidate.

(b) All possible care is taken to forward the Examination Papers in accordance with the applications, but the Board cannot undertake to rectify mistakes for which the Board are not responsible.

23.—(a) Examinations should only be held in rooms which are adequately lighted. The rooms should have level floors and be without galleries, and should as a rule be such as to accommodate candidates so that they may be seated not less than 5 feet apart from centre to centre.

(b) Examinations in Practical Chemistry (Inorganic and Organic) and in Practical Metallurgy may be held only in laboratories approved by the Board.

24. For each room in which an Examination is held provision of Superintendents must be made on the following scale:—

- 30 candidates or less - One Superintendent.
- 31 to 70 candidates - Two Superintendents.
- 71 or more candidates - Three Superintendents.

25. For Examinations in Practical Chemistry or Practical Metallurgy there must be two Superintendents for 30 candidates or any smaller number.

26. Where a large room is divided by partitions, each separate section must be treated as a separate room. An additional Superintendent must be provided in any L-shaped or T-shaped room.

27. Detailed Instructions for the superintendence of Examinations will be issued in due course to Special Local Secretaries and to Managers who have applied for Examinations.

28.—(a) The Board, after such investigation as they may think necessary, may cancel the examination of all or any of the candidates, in cases where there is evidence of fraud or where there has been such breach of the Instructions as, in their opinion, may be sufficiently serious to invalidate the Examination, or, alternatively may require all or any of the candidates to be re-examined. If any candidate should fail to appear at an investigation, or decline to be re-examined,

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28.—(a)—*cont.*

the Board may refuse to announce any results in respect of the Examinations taken by him in the same year.

(b) The Board may make it a condition of any special examination they consent to hold where there has been failure to hold an examination through no fault of the Board that the whole cost incurred is met locally.

**SYLLABUSES UPON WHICH GENERAL
EXAMINATIONS IN SCIENCE AND TECHNOLOGY
AND COMPETITIVE EXAMINATIONS FOR
AWARDS IN SCIENCE WILL BE
HELD IN 1915.**

(N.B.—In Coal Mining General Examinations only are held.)

**GROUP A.—PURE AND APPLIED
MATHEMATICS.**

SUBJECT 1.—PRACTICAL GEOMETRY AND GRAPHICS.

This subject (formerly known as Practical Plane and Solid Geometry) comprises the graphical representation of position and form and the graphical solution of problems.

Throughout the course there should be applications of geometry to problems which arise in connection with the Building and Engineering trades and the Physical Sciences. It is not expected, however, that Building Construction students, for example, should show very much interest in portions of the subject such as the Geometry of the motions of machines, or some parts of Vector Geometry, which are very important for Mechanical Engineers; on the other hand the latter have not much concern with many parts of Solid Geometry. In order to meet these various conditions, a large choice of questions will be provided, which, including those of a general character, will enable the examination to be taken by students who are devoting themselves more especially to that subject-matter which has a particular bearing upon their own industry. It should be understood that it is better to confine attention to a portion of the subject, and study this thoroughly, than to range over the whole ground in a perfunctory manner.

Much lecturing is to be avoided. Students ought to be educated mainly through their own work. A large part of this work should be quantitative, and it is important that from the beginning, and throughout the entire course, careful draughtsmanship, and the use of properly adjusted instruments, be insisted on. All constructions should be drawn with hard and finely-sharpened pencils, and left without being inked in. Careless work, or work done with soft or blunt pencils, will be discredited in the examination.

Any method of working which commends itself in enforcing a geometrical truth may be employed. Thus graphical constructions may be supplemented by arithmetic when comparing quantitative results. Tracing paper will be found useful when applying the method of superposition, or plotting a locus, finding the length of a curve, &c. Squared tracing paper will sometimes prove helpful. Models should be freely used, especially in Solid Geometry.

Deductive reasoning and generalisations may be introduced from time to time as the student becomes fitted for them, and when any portions of the subject specially require them. Teachers should develop and illustrate the subject in the way best suited to the local circumstances.

Candidates should bring with them to the examination a drawing board (22 inches by 15 inches), tee square, set square, lead pencils, drawing pins, compasses, protractor, and decimal scales in which the main divisions are inch, half inch, quarter inch, one-eighth inch, and one centimetre long; also inch scales subdivided into eighths and twelfths.

Drawing paper, pens, and ink will be provided, as will also the necessary Tables,* and candidates will be restricted to the use of these Tables, and will not be allowed to bring with them into the examination room any other Mathematical or Logarithm Tables. The use of slide rules is permitted.

Compulsory questions may be set at the examinations.

Lower Examination.

PLANE GEOMETRY.

The construction and use of scales.

The plotting and measurement of angles in degrees and radians by the use of protractor, scale of chords, trigonometric tables or tracing paper.

The division of lines into parts in given proportions, and other illustrations of the propositions of the sixth book of Euclid. Third and fourth proportionals.

The location of points by rectangular and radial co-ordinates, and by triangulation. The construction of any polygon from adequate data. Similar figures. Enlarging and reducing figures by radial projection and by the method of squares.

Verification of the propositions of Euclid III., 34, 35, 36. Applications, including constructions for finding a mean proportional.

Areas of triangles, polygons, and curved figures. The circumference and area of a circle determined experimentally.

The construction of circles from specified data. Tangents. Angles in a segment. Applications to problems in surveying.

Regular polygons. Examples of inscribed and circumscribed figures, with applications to geometrical patterns, and window tracery. Mouldings.

The ellipse, hyperbola and parabola, with their tangents and normals.

Examples of geometrical loci, tracing paper being employed whenever convenient. The setting out of linkwork; the tracing of point paths in mechanisms.

Constructions relating to simple harmonic motions or harmonic functions. What is meant by periodic time, frequency, amplitude, phase, epoch, representative crank, advance, lag, lead. Interpretation of the expression $x = a \sin (qt + \alpha)$ or $= a \sin (\theta + \alpha)$. Plotting the curve of sines from given data. Combinations of simple harmonic motions.

Miscellaneous problems and applications of geometrical principles.

Vector Geometry.—Vector summation applied to forces acting at a point. Experimental verification of the triangle and polygon of forces by means of spring balances, or cords, pulleys, and weights, combined with graphical construction.

Every candidate should have an opportunity of actually making these experiments himself and not of merely seeing the teacher or someone else make them.

Meaning of the symbols $+$, $-$, $=$, when applied to vectors. Meaning of such expressions as $A = a_a = 21_{55^\circ}$, $A + B$, $A - B$, $a_a + b_b - c_c$, $2 \cdot 4_{80^\circ} + 1 \cdot 7_{130^\circ} - 3 \cdot 5_{271^\circ} = a_a = A$. Verification by drawing of the bracket law as expressed by the equation $A - (B - C) = A - B + C$. Vector subtraction applied to relative positions, displacements and velocities. Meaning of the scalar product of two vectors, with illustrations. Momentum and change of momentum, with applications.

Force in a plane defined by the statement of a length, a magnitude, and an angle.

Let OX be a fixed line in the plane, O a fixed point in OX . Let the line of any force A (magnitude a) cut OX in I . Let x be the length of the intercept OI . Let α be the angle measured anti-clockwise, which the force, supposed to act outwards from I , makes with OX . Then $A = x_a^\alpha$ defines the force.

* "Mathematical Tables" printed on pages 76 to 80 and also published separately by the Board. Price 1d.

The link polygon. Experimental illustration by means of spring balances, or pulleys, cords, and weights; verification by drawing of the relations which exist between the forces, the form taken by the cord, and the tensions in the segments of the cord. Conditions of equilibrium of a set of forces in one plane (the force polygon and the link polygon must be closed). Applications. Force diagrams for roof trusses and other braced frames.

Moments of forces. Couples. Experimental verification of the principle of moments.

Students of building construction may omit most of this work on vectors.

SOLID GEOMETRY.

Various methods of defining the positions in space of points, lines, and planes, including the method of figured plans. Horizontal and vertical traces. Inclinations of lines and planes to the planes of projection.

General problems on lines and planes, with applications. Their intersections; the angles between them; parallel and perpendicular lines and planes. Auxiliary plans and elevations. Rabattements.

Problems on trihedral angles and spherical triangles, with applications.

Prisms and pyramids, the regular tetrahedron and octahedron, the sphere, the right circular cylinder and cone; other objects. Plans, elevations, and sections of these solids singly or in combination. Interpenetrations and developments.

Metric or parallel pictorial projections, applying the principle that parallel lines project into parallel lines, and to the same scale.

Applications of the preceding problems in solid geometry requiring quantitative measurements.

N.B.—Some of the problems in solid geometry occur in connection with simple roofs, hipped roofs, intersecting roofs, roofs of bay windows, trimming roofs for chimneys, finding lengths of rafters and bevels for hip and jack rafters and purlins; hand railing, the development of the rail on a quarter space landing, determination of hand-rail bevels, development of strings for stairs, falling and face moulds for hand railing. Plans, elevations, and sections of simple masonry domes, circular in plan, showing the joints; plans, elevations, and sections of stone and brick niches, showing joints, &c. Sloping ground, embankments; joints in woodwork.

During the course of study opportunities will occur from time to time of explaining the nomenclature of the subject, and what is meant by projection, the angle between a line and plane, or between two planes, &c.

Higher Examination.

Candidates must have an intimate acquaintance with the portions of the subject enumerated in the Syllabus for the Lower Examination. Questions in the following portions of the subject may also be set:—

PLANE GEOMETRY.

The construction of conic sections from adequate data. Archimedian, logarithmic and other spirals. Scrolls and volutes. Involution and evolutes. Mouldings. Applications of geometry to Architecture.

N.B.—The succeeding portions of Plane Geometry need not be regarded as essential for those students whose work has special relation to the Building Trades.

Geometry of the curves $y = a + bx^n$ and $y = a + be^x$, with applications.

Roulettes. Envelopes. Curvature. Wheel teeth. Cam profiles.

The successive integration and differentiation of curves and diagrams, with applications.

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Vector Geometry.—Further applications of the link polygon. Determination of centre of gravity, moment of inertia, and radius of gyration. Diagrams of shearing force and bending moment for beams transversely loaded. The loaded flexible cord and the linear arch. Masonry arches. The three hinged arched rib; diagrams of thrust, shearing force and bending moment. Braced frames in three dimensions. Deflections of braced frames. Wind forces on aerofoils.

Motions of fluids over fixed or moving vanes, with applications to turbines and centrifugal pumps.

The hodograph. Velocity and acceleration images. Rotation vectors. Harmonic analysis. Applications to problems on balancing; to plane motions of machines; and to electrical problems.

SOLID GEOMETRY.

(N.B.—Students whose work has special relation to engineering trades will not, as a rule, find it necessary to do so much work in Solid Geometry as those who are concerned with problems arising in Building Construction.)

General problems on the point, line and plane.

Projections and sections of the geometrical solids enumerated in the Syllabus for the Lower Examination, together with regular and irregular polyhedra; oblique cones and cylinders; solids of revolution, including the annulus; helical surfaces, including screw threads, spiral springs, and propeller blades. The ellipsoid, hyperboloid and paraboloid. Curves and surfaces generated by the motions of points and lines in space. Tortuous curves.

Tangent planes and tangent surfaces. Interpenetrations. Developments, including approximate developments of twisted surfaces, with applications to sheet metal work.

Cast shadows, with parallel or divergent rays. Simple examples of perspective projection.

The use of contours in problems relating to irregularly curved surfaces, such as those of earthworks, ships, &c. Areas of surfaces and volumes of solids and of earthwork. Prismoidal formulæ.

Applications of Solid Geometry to the setting out of moulds and bevells, and to problems that occur in connection with hand railing, rails to geometrical stairs, development of string; voussoirs and general masonry work; vaults; cupolas; arches, elliptical in elevation and slightly segmental in plan, &c.

SUBJECT 2.—PURE MATHEMATICS.

Lower Examination.

No candidate will be allowed to pass who fails to obtain marks in any one of the three sections.

N.B.—It is important that each candidate should bring to the examination a pair of compasses, a scale of equal parts, and a protractor.

Mathematical Tables will be provided at the examination.

1. **GEOMETRY.**—The properties of lines, rectilinear figures, and circles as far as they are treated in the first four books of Euclid. The theory of similar figures.

The questions in this subject will generally be given so as to bring out as far as possible the candidate's knowledge of the principles of Geometry. Answers to questions may be given on any system which the student may have followed, provided the reasoning be clear and accurate.

2. **ALGEBRA.**—The elementary rules of Algebra. Factors. The simplification of algebraical expressions. Simple equations, and problems

producing them. Involution and evolution. Surds. Quadratic equations, and problems producing them. Ratio, proportion, and variation. Arithmetical and geometrical progressions.

3. PLANE TRIGONOMETRY.—Definitions. Measurement of angles by degrees and radians. The trigonometrical functions, and the conversion of one into another. Use of the positive and negative signs to denote contrariety of direction. Tracing of the trigonometrical functions in magnitude and algebraic sign through the four quadrants. The arithmetical values of the trigonometrical functions of 30° , 45° , 60° , 75° , 90° , &c. The trigonometrical ratios of the sum and difference of angles, and of the multiples and submultiples of an angle.

LOGARITHMS.—Definition. Multiplication, Division, Involution, and Evolution by logarithms. The use of tables of logarithms of numbers, and of sines, cosines, &c., of angles. Interpolation by proportional parts for numbers and angles.

TRIANGLES.—Solution of all cases of right-angled and oblique triangles, and proofs of the requisite formulæ. Heights and distances. Area of a triangle.

Higher Examination.

Two papers will be set in this Examination, but the two papers will constitute one Examination only, and only one result will be declared for each candidate.

No candidate will be adjudged to have passed the Examination who does not show reasonable proficiency in the subjects of both papers.

N.B.—It is important that each candidate should bring to the examination a pair of compasses, a scale of equal parts, and a protractor.

Mathematical Tables will be provided at the examination.

FIRST PAPER.

- ALGEBRA.—The theory of indices. Simple cases of the summation of series. The simpler tests of the convergence and divergence of series. The binomial, exponential, and logarithmic series. Partial fractions. Elementary Determinants. Imaginary and complex quantities. De Moivre's Theorem.

- CO-ORDINATE GEOMETRY OF TWO DIMENSIONS.—Co-ordinates of a point.

Equations of straight lines, and the treatment of questions relative to their intersection, concurrence, inclination, parallelism, perpendicularity, &c.

Equations of circles, their tangents and normals. Questions concerning the intersection of circles, and the determination of circles which satisfy given conditions.

The simpler forms of the equations of the parabola, ellipse, and hyperbola, as determined from various definitions of those curves. The equations of their tangents and normals. The principal properties of their diameters, axes, foci, conjugate diameters, asymptotes.

- CO-ORDINATE GEOMETRY OF THREE DIMENSIONS.—Co-ordinates of a point referred to rectangular co-ordinate axes. Direction-cosines of straight lines. Inclination of two straight lines. Locus of points whose co-ordinates satisfy a given equation, or two given equations. Equations of planes and of straight lines. Determination of their inclinations, and of the conditions of their parallelism and perpendicularity. Other questions concerning straight lines and planes. Equations and fundamental properties of surfaces of the second degree, especially with regard to surfaces of revolution.

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SECOND PAPER.

1. **DIFFERENTIAL CALCULUS.**—Definitions. Limits. Differential coefficients. Differentiation of simple functions, of inverse functions. Successive differentiation of functions of one variable. Taylor's and Maclaurin's Theorems and their simpler applications. Determination of values of functions when indeterminate in form. Differentiation of a function of a function and of implicit functions. Maxima and minima of functions of one independent variable. Differentiation of functions of two or more independent variables.

Applications of the preceding to the geometry of plane curves referred to rectangular or to polar co-ordinates. Tangents, normals, sub-tangents, sub-normals, asymptotes. Singular points. Contact and curvature. Tracing of curves. Differential coefficients of arcs and areas of plane curves, and of the surfaces and volumes of solids of revolution.

2. **INTEGRAL CALCULUS.**—Meaning of definite and indefinite integration. Integration of the more frequently occurring functions. Integration by parts. Rational fractions. Formulæ of reduction. Applications to areas and lengths of curves, to volumes and areas of surfaces of revolution, to centres of gravity, and moments of inertia.
3. **ELEMENTARY DIFFERENTIAL EQUATIONS.**—Integration of differential equations of the first order and degree. Integration of linear differential equations of the second and higher orders with constant co-efficients.

SUBJECT 3.—PRACTICAL MATHEMATICS.

Slide rules may be used at the examination. Mathematical Tables will be provided with the examination papers.

Compulsory questions may be set at the examinations.

Lower Examination.

Contracted and Approximate Methods in Arithmetical Computation.

Rules of Indices. Reasons for the use of logarithms.

The principle underlying the construction and method of using a common slide rule; the use of a slide rule in making calculations. Conversion of common logarithms into Napierian logarithms. The calculation of square roots by the ordinary arithmetical method. Simplification of fractions.

Being told in words how to deal arithmetically with a quantity, to be able to state the matter algebraically. Problems leading to easy equations in one or two unknowns. Easy transformations and simplifications of formulæ, and in easy cases finding any one of several quantities in a formula when the others are given. Practice in algebraic manipulation generally. The determination of the numerical values of constants in equations of known form, when particular values of the variables are given.

The factors of $x^2 + ax + b$ when numerical values are given for a and b .

Students ought from the beginning to be taught that even a complex looking formula is quite easy to evaluate if numerical values of the quantities are given, and that such symbols as $\sin a$, $\log a$, &c., merely direct him to refer to certain tables. To deduce complex formulæ may require much mathematical knowledge, but to use them needs mere arithmetic.

Simple rules in mensuration concerning circles and triangles; the areas of the surfaces of cylinders, cones and spheres, and their volumes. Practical methods of finding areas and volumes such as suggest themselves in experimental work. Determination of weights from volumes when densities are given.

Area of the surface of a circular anchor ring. The determination of the area of an irregular plane figure (1) by using a planimeter (a knowledge of the theory will not be expected), (2) by using Simpson's or other well-known rules for the case where a number of equidistant ordinates or widths are given, (3) by the use of squared paper whether the given ordinates or widths are equidistant or not, the "mid-ordinate rule" being used. Determination of the volume of a circular anchor ring. Centre of gravity. Guldinus' theorems.

The determination of the volume of an irregular solid by each of the methods for an irregular area, the process being first to obtain an irregular plane figure in which the varying ordinates or widths represent the varying cross sections of the solid. Prismoidal Formula.

Stating a mensuration rule as an algebraic formula. In such a formula any one of the quantities may be the unknown one, the others being known.

The practical uses of squared paper in plotting statistics, interpolation, probable errors of observation, finding average values, finding areas and volumes. The plotting of functions, such as $y = ax^n$, $y = ae^{bx}$, where a , b , n , may have all sorts of values. The straight line; meaning of its slope. Slope of a curve at any point in it. Easy exercises on rates of increase of y with regard to x in the case of $y = ax^n$. Determination of maximum and minimum values. The solutions of equations. Very clear notions of what we mean by the roots of equations may be obtained by the use of squared paper. Rates of increase. Speed of a body. Determination of laws which exist between observed quantities, especially of linear laws. Corrections of errors of observation when the plotted quantities follow approximately a straight line law. The probable formula connecting such quantities. Easy examples of the use of Integration.

If y is a quantity which depends upon another quantity x , and if the corresponding values are tabulated, there are many cases in which it is useful to tabulate $\delta y/\delta x$ for each interval; and also to tabulate $y.\delta x$ and to obtain what is an approximation to the integral of y .

Dividing lines by practical geometry into parts in given proportions, and other illustrations of the 6th Book of Euclid. Measurement of angles in degrees and radians. The definitions of the sine, cosine, and tangent of an angle; determination of their values by graphical methods; setting out of angles by means of a protractor or scale of chords when they are given in degrees or radians, also when the value of the sine, cosine, or tangent is given. Use of tables of sines, cosines, and tangents. The solution of a right-angled triangle by calculation, and by drawing to scale. The construction of a triangle from given data; determination of the area of a triangle.

Sines, &c., of angles greater than a right angle, the curve of sines.

The more important propositions of Euclid may be illustrated by actual drawing; if the proposition is about angles, these may be measured by means of a protractor; or if it refers to the equality of lines, areas, or ratios, lengths may be measured by a scale and the necessary calculations made arithmetically. This combination of drawing and arithmetical calculation may be freely used to illustrate the truth of a proposition. A good teacher will occasionally introduce demonstrative proof as well as mere measurement, but only if his pupils take pleasure in it.

The method of representing the position of a point in space by its distances from three co-ordinate planes. How the angles are measured between (1) a line and plane, (2) two planes. The angle between

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two lines has a meaning whether they do or do not meet. What is meant by the projection of a line or plane figure on a plane. Plan and elevation of a line which is inclined at given angles to the co-ordinate planes. The meaning of the terms "trace of a line," "trace of a plane."

The distinction between a scalar quantity and a vector quantity. Addition and subtraction of vectors. Rate of change of a vector quantity.

Higher Examination.

The instruction given should include a revision of some of the more important portions stated in the syllabus for the Lower Examination. In addition, the following should be considered:—

More practice in the use of logarithm and other mathematical tables for finding numerical values from more difficult or more complicated formulæ. More attention to method in carrying out computations of all kinds. The use of approximate formulæ such as

$$(1 + a)^n = 1 + na \text{ when } n \text{ or } a \text{ is small compared with } 1.$$

Rules in Arithmetic (as of compound interest, &c.) and in Mensuration, stated as algebraic formulæ. Any one of the quantities in a formula may be the unknown one.

Practice in the simplification of algebraical expressions. Solution of equations, and problems leading to equations. Resolutions of a fraction into partial fractions.

Knowledge of such limits as $\sin \theta \div \theta$ when θ is small.

How to find the values of the sine, cosine, and tangent for angles greater than 90° .

Fundamental relations, such as $\sin^2 \theta + \cos^2 \theta = 1$.

Calculating the values of $\sin x$, $\cos x$, e^x , and $\log x$ using series.

Proving the fundamental formulæ for the sine and cosine of the sum or difference of two angles, such as

$$\sin(A + B) = \sin A \cdot \cos B + \cos A \cdot \sin B.$$

Formulæ derived from the above, such as those for the sum and difference of two sines or cosines, and those which connect an angle and the double angle.

The sine rule, or $\frac{\sin A}{\sin B} = \frac{a}{b}$ in triangles. Also, for a triangle, the rule $c^2 = a^2 + b^2 - 2ab \cos C$.

The expression for the area of a triangle, having given two sides and the included angle, $\frac{1}{2} ab \sin C$.

The truth of such formulæ ought to be illustrated numerically and graphically by taking numerical values of the quantities, but the proofs are also supposed to be known to candidates.

Theorems relating to areas and volumes of surfaces and solids of revolution. Exercises on the area of a segment and sector of a circle, the area of the surface of a sphere between any two parallel planes; approximate rules for length of a circular arc.

Finding centres of gravity and moments of inertia, using squared paper.

The plotting of functions on squared paper, including such as $y = ax^n$; $y = ae^{bx}$; $y = a \sin(cx + d)$; $y = ae^{bx} \sin(cx + d)$.

Having given observed values of two varying quantities which are supposed to follow one or other of laws like $pv^n = c$, $y = a + bx^2$, $xy = bx + cy$, to find the probable values of the constants.

When two varying quantities are known to follow a given complex law, to determine a simpler law which, between certain limits, will give values approximating to the correct ones.

Solving equations by the use of squared paper.

Maximum and minimum problems.

How the position of a point in space is defined by its rectangular co-ordinates x, y, z , or by its polar co-ordinates r, θ, ϕ ; the relations between x, y, z and r, θ, ϕ .

Determination of the three angles α, β, γ which a given line makes with the three co-ordinate axes; the relation

$$\cos^2 \alpha + \cos^2 \beta + \cos^2 \gamma = 1.$$

Determination of the angles between a given line and each of the co-ordinate planes.

When a plane is given by its traces, to determine its inclination to each of the three co-ordinate axes and planes.

Representation by its projections on the three co-ordinate planes, of a line whose position and real length are given.

Determination of the angle between two given lines; the angle between two planes whose traces are given. Represent by its projections the line of intersection of two planes whose traces are given.

Such examination of candidates as requires the use of instruments and drawing boards is regarded as part of Subject 1.—Practical Geometry and Graphics.

The scalar product and vector product of two given vectors, with illustrations. Easy Vector Algebra. The meaning of $\mathbf{C} \cdot \mathbf{V} \cdot \mathbf{A} \cdot \mathbf{B}$ and $\mathbf{V} \cdot \mathbf{C} \cdot \mathbf{V} \cdot \mathbf{A} \cdot \mathbf{B}$. Rate of increase of a vector quantity.

Rate of increase of one quantity relatively to that of another; approximate methods of calculating a rate of increase as, for example, in the case where simultaneous values of two varying quantities have been observed experimentally, or by finding the slope of the curve obtained by plotting such values. In what follows, the letters x and y may be replaced by others.

The term "differential co-efficient" as applied to a rate of increase; and the symbol for it, namely $\frac{dy}{dx}$, where y and x represent the two varying quantities.

Proofs of the rules for finding the differential co-efficient of y with respect to x , that is, $\frac{dy}{dx}$, when y and x are related in the following ways:—

$$y = ax^n; y = ae^{bx}; y = a \cos (bx + c); y = a \sin (bx + c); y = A \log (x + a).$$

The study of these functions and such studies of curves as require these differential co-efficients.

Proof and use of the rules for differentiating a product or quotient of two functions or the function of a function; partial differentiation.

Calculation of maximum and minimum values.

Integration regarded as the inverse of differentiation, or as a process of summation; the symbols

$$\int y \cdot dx \text{ and } \int_a^b y \cdot dx; \text{ rough methods of finding an approximation to } \int_a^b y \cdot dx$$

when tabulated numerical values of y and x are known.

The expressions for the integrals of

$$ax^n, ae^{bx}, A/(x + a), A \sin (ax + b), A \cos (ax + b).$$

Integrating by parts and by substitution and other simple devices. Finding areas of curves and surfaces and volumes requiring these integrals. The solution of easy differential equations. Illustrations of the use of the calculus in many kinds of study, more especially in physics and engineering. When x and y are tabulated, to find for a particular value of x the value of dy/dx .

Special attention ought to be paid to graphical methods of integration, using squared paper; the construction by graphical methods of curves from a given law of slope, this law being given either by means of a curve, or by a simple algebraic expression, or by means of a simple differential equation.

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Natural and forced vibrations. In dealing with periodic functions of the time such as $\sin pt$, the use of pi for d/dt where i is $\sqrt{-1}$. Illustrations from electric circuits with periodic currents. The study of $\sinh x$, $\cosh x$, $\tanh x$. Simplification of complex functions of unreal quantities. The computation of $\sinh x$ or $\cosh x$ when $x = a + bi$. Illustrations from problems on heat conduction or telephonic circuits. In general it may be said that this syllabus comprises illustrations of the use of the calculus from all parts of mechanical and electrical engineering.

SUBJECT 4.—THEORETICAL MECHANICS (SOLIDS).

SUBJECT 5.—THEORETICAL MECHANICS (FLUIDS).

There are two distinct nomenclatures applicable to Theoretical Mechanics. According to one, the science that investigates the action of force is called mechanics, and is divided into (a) statics, treating of the equilibrium of particles and bodies, (b) dynamics, treating of the motion of particles and bodies, (c) hydrostatics, (d) hydrodynamics, treating respectively of the rest and motion of fluids, *i.e.*, liquids and gases. This nomenclature is adopted by many writers of authority, *e.g.*, by Poisson. According to the other, the term dynamics takes the place of mechanics, and the division is into: (i) statics, (ii) kinetics, (iii) hydrostatics, (iv) hydrokinetics. This is a question of words only, but of course one terminology may be better than another. It is, however, to be observed that a considerable number of questions formerly treated under the head of (b) dynamics, relate to motion without reference to the forces producing it. These questions form a distinct branch of pure mathematics, to which the name of kinematics is not commonly given. Certain parts of kinematics come into this subject but they occupy a subordinate position in it.

For the purpose of the Board's Examinations Theoretical Mechanics is treated as two subjects, the first corresponding to (a) and (b) defined above, the second corresponding, with modifications, to (c) and (d). In most cases it would be best for candidates to take up the Lower Examination in the first subject before attempting the second subject. However, they take their choice, and to enable them to take up the second subject separately the syllabus contains several articles which also come into the first subject.

In each subject there is a Lower and a Higher Examination. The relation between the standards is much the same in the two cases.

For the Lower Examination the candidate is required to make himself acquainted with the elementary propositions and formulæ of the science and with their formal proof in all cases where a knowledge of the differential and integral calculus is not involved. A knowledge of pure mathematics up to the point where the study of the calculus commences may be necessary. Great attention should be paid to graphical constructions and methods. A good drawing of an actual mechanical instrument or device takes the place of much written description and favourably impresses an examiner.

Experimental work will be found useful throughout in making students familiar with mechanical ideas.

In the Higher Examination it will be assumed that the candidate has a more advanced knowledge of pure mathematics, and in particular of advanced graphical methods.

Compasses, a scale of equal parts, and a protractor will be required at the examinations.

Compulsory questions may be set at the examinations.

SUBJECT 4.—THEORETICAL MECHANICS (SOLIDS).

Lower Examination.

1. Units of time and length; relative rest and motion; measurement of velocity and acceleration; composition of velocities and accelerations; angular velocity; unit of mass; density; specific gravity; unit of force; measurement of force; momentum; impulse; energy; work; rate of doing work.
2. Composition, resolution, and equilibrium of forces; moments; couples; centre of parallel forces; laws of motion.
3. Centre of gravity; reaction of smooth surfaces, points and hinges; friction; tension; the simple machines without and with friction; equilibrium of a body resting on a smooth or rough axle; the balance.
4. Uniformly accelerated rectilinear motion; motion on smooth and rough inclined planes; Atwood's machine.
5. Virtual work; stable and unstable equilibrium; work done by a variable force; diagrams of work; the indicator diagrams.
6. Motion of projectiles; motion in a circle; motion of a simple and of a compound pendulum; the small oscillations of a pendulum; convertibility of the centres of suspension and oscillation.
7. Equation of work and energy for a constant force and of impulse and momentum for an impulsive force; direct and oblique impact of smooth spheres.
8. Different states of matter; elasticity; resistances to elongation, compression and bending.

Higher Examination.

The student should be prepared to answer somewhat more difficult questions than those set in the Lower Examination.

1. General theory of the composition and resolution of forces and of the equilibrium of a rigid body.
2. Strength and resistance of materials; deflections and rupture of beams; the theory of the construction of roofs; determination of the stresses on the different parts of a trussed roof.
3. The elements of uniplanar kinematics; elementary theory of attractions.
4. Differential equations of the motion of a particle; constrained motion of a particle; motion of a particle under the action of a central force.
5. Equilibrium of threads; the common catenary; the catenary of equal strength.
6. Moments and products of inertia; motion of a rigid body about a fixed axis; energy of a rotating body; equations of the motion of a rigid body in two dimensions.

SUBJECT 5.—THEORETICAL MECHANICS (FLUIDS).

This subject cannot be understood unless the candidate has a preliminary acquaintance with the fundamental notions of force and motion, on which all parts of the science are based. These are given in Section 1 of the following syllabus.

Lower Examination.

1. Units of time and length; measurement of velocity and acceleration; composition of velocities and accelerations; angular velocity; unit of mass; density; specific gravity; units of force; measurement of force; composition, resolution, and equilibrium of forces; uniform circular motion; momentum, impulse, energy, work, rate of doing work; equation of work and energy; work done by a variable force.

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2. Transmission of pressure through a fluid; surface of a liquid acted on by gravity and pressure at any point within the liquid; whole pressure resultant pressure on an immersed surface, plane or curved; centre of pressure in simple cases.
3. Equilibrium of bodies floating freely or partly supported; metacentre in simple cases; tension of a thin flexible cylinder or sphere under internal fluid pressure.
4. The hydrostatic balance; the specific gravity bottle; Nicholson's hydrometer; hydrometer of variable immersions; suction pump; forcing pump; siphon; screw of Archimedes; air pump and mercurial gauge; compressed air manometer; the hydraulic press; the diving bell and diving dress.
5. Thermometers with Fahrenheit, Centigrade, and Réaumur scales; the absolute zero.
6. Pressure and elasticity of air; the gaseous laws; the barometer; height of the homogeneous atmosphere; effect on this height of variations of gravity and temperature; pressure of mixed gases; pressure of vapour; saturation; dew point; densities of dry and moist air; work connected with a gas expanding at a constant temperature.
7. Discharge of a liquid from a small orifice in the side of a vessel; velocity of the descending surface of the liquids; surface of the liquid in a vessel which rotates steadily about a vertical axis; pressure at any point of the liquid.

Higher Examination.

The student should be prepared to answer somewhat more difficult questions than those set in the Lower Examination.

1. Pressure at any point of a fluid at rest acted upon by any forces; centre of pressure in the general case; stability of flotation in respect of small displacements.
2. Hygrometry; the air thermometer; determination of heights by the barometer.
3. Adiabatic expansion; Carnot's cycle; elementary theory of molecular forces and capillarity; the kinetic theory of gases.
4. Elementary hydrodynamics; equation of continuity; steady motion under the action of gravity; the theorem of Bernoulli; simple cases of wave motion under gravity; oscillatory waves; long waves in shallow water; waves in very deep water.

GROUP B.—ENGINEERING.

SUBJECT 6.—MACHINE CONSTRUCTION AND DRAWING.

Students presenting themselves for examination in this subject are expected to show that they possess a general knowledge of machinery, combined with an accurate knowledge of the form of the commoner elements which enter into the construction of machines; and a knowledge of the properties of the materials employed in machine construction. They must understand how to estimate the straining actions brought on to the materials of the several parts, and how to proportion the parts in order properly to resist these actions. They must be familiar with the various workshop processes by which the individual parts of a machine are made and wrought to the finished size, and the ways in which the parts are assembled and placed in their proper positions relatively to one another.

In addition to this knowledge the student must have acquired the art of making a drawing of such a nature that a workman can make what the drawing represents without the necessity of asking a single question from the designer, or of exercising his own discretion with respect to the size or form of the smallest detail.

The students' knowledge of this subject will be tested chiefly by means of drawings, though questions relating to Constructional details requiring hand sketches and written answers will be set in the Lower Examination.

A student should be taught to make a working drawing of any machine part he sees. This will lead ultimately to his acquiring the power of making a working drawing of anything he conceives. From the first, attention should be given to the proper dimensioning of drawings. The figures should be bold and clear, and the dimensions given should be such that during the whole process of manufacture in the shops the workman has never to find the dimension he wants by addition or subtraction of the dimensions given or by measurement from the drawing.

The following suggestions for a course of instruction may be found useful. After a few preliminary exercises to gain some skill in the use of instruments the student may be set to make a few tracings of simple drawings, and these tracings should be made, some on tracing paper and some on tracing cloth. If possible, students should then be shown how to reproduce these by one or more of the many photographic processes employed by engineers for the purpose. Then the drawing of simple machine details should begin. Copies should not be used, but the student should make a freehand and dimensioned sketch from the object itself. The teacher should devote special attention to the examination of these freehand sketches, and should encourage the student to make all his sketches in a squared-paper note-book with as much neatness and accuracy as possible. After sketching and drawing the various machine details the student should make a general drawing of a complete machine from actual measurement, care being taken to dimension the centre lines properly. With practice and care a student should soon be able to make completely dimensioned freehand sketches of a machine, so that the drawing can be made from the sketches without further reference to the machine itself. To cultivate this carefulness, the student should enter in his note-book the number of times he has to return to the object to take an omitted dimension. As an introductory exercise to design, a small-scale general arrangement drawing of an engine or other machine should be given to a student, from which he should make detail drawings of the fastenings, and the simpler parts which would probably be merely indicated on the general arrangement.

In no part of the course should drawings be given to the student merely to copy. In the earlier stages he should draw from the objects themselves; in the later stages drawings may be given him from which to make enlarged drawings of details, or from which he can make a general drawing from given details.

A practice which is common in many drawing offices is to make drawings in pencil only, to trace them in ink, and to make photographic copies of the tracings. The tracing is kept in the office for reference, and the copies are sent into the works. A tracing exercise will be set in the Lower Examination to be done in Indian ink. Tracing paper will be supplied, but a candidate must bring his own Indian ink.

All students should provide themselves with the following scales:—

Full size, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{10}$, $\frac{3}{32}$, $\frac{1}{16}$, reading inches and fractions of half, quarter, or eighth inches, and these scales must be brought to the examination.

A copy of the examination tables will be supplied to candidates in the Higher Examination to assist them in calculation. Slide rules may be used.

Compulsory questions may be set at the examinations.

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Lower Examination.

The candidate's knowledge and skill will be tested by an exercise in drawing, an exercise in tracing, and by some questions.

In the drawing exercise, which must be drawn in simple or orthographic projection, in pencil, to a given scale, a candidate may be required to draw details from a given general arrangement, or to draw a general arrangement from given details, or to draw sectional views, elevations, and plans from sketches not necessarily in proportion, but such as would be found in a draughtsman's note-book.

Fastenings and parts omitted must be added. A candidate will be expected to exhibit skill as a draughtsman by the accuracy and neatness of his drawings.

All the views drawn by the candidate must be projected the one from the other, and no credit will be given if the candidate shows that he does not appreciate the fact that he is producing a representation of a solid piece of machinery, and that he is not merely copying a drawing.

Centre lines must be shown distinctly. Lines not needed in the finished drawing must be rubbed out.

The exercise in tracing will be of a simple character and designed to test the skill of the candidate in neat lining, and in the neat and accurate joining of curves and lines with curves. It is to be done in ink, and the lines should be fairly heavy but of uniform thickness, with no visible discontinuities where lines and arcs of circles join or touch.

Questions will be set requiring neat freehand sketching of machine and engine details, or requiring brief descriptions of engines or engine parts, machine details, or workshop processes involved in the construction of engines and machinery. Exercises involving the determination of the sizes of parts subjected to simple tension or compression or pure shearing may be set at this stage, and part of the drawing exercise may require such calculations to be made, in order to determine the size of omitted parts or parts not dimensioned.

The scope of the examination is indicated in the following list of subjects, which a student in machine construction should study. He should make freehand sketches in his own note-book of good examples of as many of the details enumerated as possible, and accurate working drawings of a few of the machines in general arrangement, together with the corresponding detail drawings.

FASTENINGS.—Nuts and bolts. Set screws. Tap bolts. Studs. Forms of screw threads. Whitworth nuts and bolts. Keys. Cotters. Pins. Devices for locking nuts. Forms and proportion of rivets used in boiler construction, simple calculations relating to the design of single and double riveted lap and butt joints.

BEARINGS.—Form and proportions of bearings. Details of construction to facilitate adjustment, to provide for wear, and to facilitate alignment. Swivel, thrust, footstep, crank shaft, connecting rod, propeller shaft, and line shaft bearings. Locomotive axle boxes. Ball bearings. Roller bearings.

Different forms of bearing supports. Pedestals, hangers, brackets, and wall boxes.

Different forms of bearing lubricators, including continuous lubrication by means of a ring as applied to the bearings of electrical machinery.

WHEELS AND PULLEYS.—Constructional details of spur and bevel gearing. Ordinary proportions of wheels and wheel teeth, together with the forms of profiles used for wheel teeth.

Belt and rope pulleys. Open and crossed belts. Guide pulleys. Belt and rope joints. Belt shifting gear. Countershafting. Chain gearing. Worm gearing. Simple forms of cams and ratchets.

SHAFTS AND SHAFTING.—Different forms of shaft couplings. Disengaging and friction clutches.

ENGINE AND ENGINE DETAILS.—Cylinders. Pistons. Methods of connecting together piston and piston rods. Stuffing boxes. Packing, including metallic packing. Crossheads and slides. Connecting rods.

Cranks and Crank Shafts. Various forms of slide valves. Cut-off or expansion valves. Piston valves. Drop valves. Equilibrium valves. Balanced valves. Valve buckles. Valve rods and guides. Eccentric rods. Eccentric straps and sheaves. Governors. Stop valves. Details of internal combustion engines. Cams and cam gear. Water jackets. Valves and spindles.

BOILER AND BOILER DETAILS.—Construction of boilers of the marine, locomotive, and land types. Shells. Stays, including gusset, roof or girder, longitudinal, and screwed stays. The boiler mountings customarily fitted to any of these types of boilers.

PIPES AND PIPE JOINTS.—Joints for steam, gas, and water pipes. Union joints for small-diameter pipes. Methods of making joints.

HYDRAULIC MACHINERY.—Details of construction of pumps, accumulators, joints, and the hydraulic machinery commonly used in a workshop. Cup, U, and neck leathers.

TYPICAL MACHINE TOOLS, WITH DETAILS OF CONSTRUCTION.—Lathes, drilling machines, shaping machines, slotting machines, planing machines, milling and grinding machines, horizontal and vertical boring mills.

Different forms of tools and cutters, together with a knowledge of cutting angles and cutting speeds.

ELECTRICAL MACHINERY.—Mechanical details of bearings, lubrication, fastenings, and the general construction of the framing and armature.

MATERIALS.—General properties of the materials used in machine construction, including cast iron, wrought iron, steel, copper, brass, gunmetal, bronze, and white metal.

In this Examination the questions and exercises will be of a simple character, and will not relate to the details of special machinery. A choice will be given in the drawing exercise, and a student will not be expected to answer, in addition, more than two out of about five questions requiring written descriptions or freehand sketches.

Higher Examination.

The candidate's knowledge and skill will be tested by an exercise in drawing which will involve knowledge of the principles of design.

No tracing will be required.

A more extended knowledge of the subjects enumerated in the syllabus for the Lower Examination will be required, together with a knowledge of the methods used to determine the sizes of parts by calculation.

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In the drawing exercise, which must be drawn in simple orthographic projection in pencil to a given scale, the candidate will be expected to show some facility in the design of the simpler parts of machine and engine and boiler details. He will be expected to work from a simple specification usually, but not necessarily, accompanied by sketches or drawings, and to add omitted details correctly proportioned and suitably formed. The drawings must be neatly and accurately drawn.

The following subjects should be studied in connection with machine design :—

The design of pieces subject to pure tension, pure compression, pure shear, and pure bending. The simple cases of combined bending and torsion.

The safe working stresses corresponding to steadily applied loads, varying loads; and loads applied so that the corresponding stresses vary between a maximum positive and a maximum negative value. Factors of safety.

The general design of riveted joints; of flange couplings; of cottered joints; of pin and knuckle joints; of ties and struts; of shafts and axles. The design of bearings, together with the working pressures which may be used for journals running in one direction as main shaft bearings or intermittently as in cross-head journals. Forced lubrication and water-cooled bearings.

Problems connected with the design of valves and valve gears to produce a given distribution of steam. The simple eccentric gear. Reversing motions. The link motion. The design of valve gear of the Meyer type with separate cut-off valve. Valve diagrams.

Simpler problems in connection with the inertia stress in machine parts, particularly in connection with connecting and coupling rods. The design of balance weights for engines and machinery. The problems will be of a simple kind and will not include secondary balancing.

The properties of the materials used in machine design, together with a knowledge of the stress-strain diagram corresponding to them. Limit of elasticity. Ultimate strength. Percentage elongation and reduction of area. Yield point. Tempering. Hardening. Softening. Annealing. Case-hardening. The composition of the common alloys, such as brass, gunmetal, and white metal.

A choice will be given in the drawing exercise. The candidate will be expected to draw well, and to exhibit an accurate knowledge of the fundamental principles of machine design, and to possess an accurate knowledge of the forms of the fundamental machine details like fastenings, bearings, and slides.

SUBJECT 7.—APPLIED MECHANICS (MATERIALS AND STRUCTURES).

SUBJECT 8.—APPLIED MECHANICS (MACHINES AND HYDRAULICS).

Applied Mechanics is treated as two subjects. The first is arranged to include those matters usually connoted by the terms Strength of Materials and Theory of Structures, and is intended to meet the special

requirements of students intending to become Civil Engineers, Architects, or Structural Engineers.

The second is arranged to include those branches of Applied Mechanics usually connoted by the terms Theory of Machines and Hydraulics, matters which, in addition to those in the first subject, must be studied by students of Mechanical Engineering.

There must of necessity be a little overlapping through the inclusion of certain common matters in both subjects.

All these subjects should be taught as far as possible in connection with Laboratory Work. The equipment for a Laboratory of Mechanics need not be expensive. A great deal is to be learnt by the use of apparatus of the simplest kind.

The physical properties of materials may be thoroughly studied by means of a small testing machine of about ten tons capacity, which may be arranged to apply a tensile, a compressive, or a torsional load to small test pieces. Machines of a much smaller type, arranged to apply a load of about one ton, and without a straining cylinder, may be used in connection with an extensometer for the study of the elastic properties of materials.

Much simple apparatus can be made for the purpose of illustrating the principles of graphical and analytical statics.

Pulley blocks, small winches, and the machine tools in the workshops may be used to illustrate the principles of mechanism, and there is apparatus available for illustrating the dynamics of engine balancing.

A hydraulic jack, a small pump, a few tanks, with weirs, orifices, and notches of various shapes, a pipe with manometers to show the pressure at different points, are all kinds of apparatus inexpensive to provide but invaluable in the teaching of Hydraulics.

In each subject there will be a Lower and a Higher Examination. The examinations in Materials and Structures will be held on one evening, the examinations in Machines and Hydraulics on another evening.

The necessary Tables will be supplied, and candidates will be restricted to the use of these Tables, and will not be allowed to bring with them to the examination room any other Mathematical or Logarithm Tables. Slide rules may be used.

Compulsory questions may be set at the examinations.

SUBJECT 7.—APPLIED MECHANICS (MATERIALS AND STRUCTURES).

Lower Examination.

GRAPHICAL AND ANALYTICAL STATICS.—Determination of the resultant of a system of forces in one plane; forces in hinged structures; moments of forces; couples, centres of gravity; moments of inertia of areas.

MANUFACTURE AND PROPERTIES OF MATERIALS.—Timber, stone, bricks, lime, cement; concrete and reinforced concrete; cast iron, wrought iron, and steel; copper and its alloys.

ELASTIC THEORY.—Stress and strain; tension, compression and shearing stresses; extension, compression, and sliding strains; modulus of elasticity and resilience; ties and struts, the effect of the form of the cross section, of the length, and the manner of fixing its ends upon the strength of a strut or pillar; thin vessels subjected to internal fluid pressure; cotttered and riveted joints; bending moments and shearing forces, moments of resistance of beam sections, calculation of tensile and compressive stresses at all places in a beam section; simple torsion, and strength and stiffness of shafts; lines of resistance in arches.

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TESTING OF MATERIALS.—Testing of materials by tension and bending; stress-strain curves; yield point, tenacity, extension, reduction of area, work of fracture; effect of shape of tensile test bar; effect of sudden loading; initial stresses.

Higher Examination.

GRAPHICAL AND ANALYTICAL STATICS.—Determination of the resultant of forces not in one plane; forces in parts of a structure not in one plane; force diagrams to determine the forces in the various members of different types of roof trusses and built-up girders due to dead and live loads; curve of inertia; ellipse of inertia and core.

ELASTIC THEORY.—BEAMS AND GIRDEES.—Bending moments, shear forces, and deflection of beams in general; beams and girders fixed at the ends; continuous girders; relation between curvature, slope, and deflection; deflection and slope from bending moment diagrams; shearing stresses in beams; deflection due to shear; resilience of beams; combined bending and thrust. **STRUTS.**—The design of struts, Euler, Rankine, Gordon, and other formulæ; non-axial loading of struts; struts laterally loaded.

TORSION.—Stability of shafts under centrifugal force, combined bending, twisting, and thrust; twisting vibrations in shafts.

STRUCTURAL DESIGN.—Bridge girders and roof trusses; riveted joints of all classes; masonry dams; retaining walls, not surcharged, and surcharged; depths of foundations to support a given loading; masonry and metal arches; theory of masonry and brickwork arches, and of metal arches with two or three hinges, graphical methods to be employed as much as possible; reinforced concrete; moments of resistance of beams of rectangular and T section; reinforced concrete columns, approximate theories only will be required.

TESTING AND PROPERTIES OF MATERIALS.—Commercial testing of metals, timber, stone, cement, &c. Strain hardening and annealing of metals, Impact tests. Repetition of loading. Hardness tests. Results of the most recent investigations into the properties of the more important alloys of iron and of copper.

SUBJECT 8.—APPLIED MECHANICS (MACHINES AND HYDRAULICS).

Lower Examination.

GRAPHICAL AND ANALYTICAL STATICS.—Determination of the resultant of a system of forces in one plane; forces in hinged mechanisms; moments of forces; couples; centres of gravity; moments of inertia of rotating bodies.

DYNAMICAL THEORY.—Velocity and acceleration; force and motion of bodies having a motion of translation; average force of a blow; energy, work, and power; sliding and rolling friction; mechanical advantage, velocity ratio, and mechanical efficiency; dynamics of rotating bodies; centrifugal force; reciprocating motions and vibration linear and angular; balancing of quick-running machinery; vibration.

MECHANISMS AND MACHINES.—Conversion of motion; velocity ratios; belts, ropes, chains, links, wheel trains; chain gearing; lifting tackle; screws; cylindrical bearings; ball and roller bearings; couplings and clutches.

HYDRAULIC THEORY.—Fluid pressure; changes of pressure and velocity along the stream lines in fluids; in the various parts of a centrifugal pump or turbine. Gauge notches for measuring water. Friction in

pipes, and the effect of friction in pipes and passages of hydraulic machinery. Impact of jets on fixed and moving vanes.

HYDRAULIC MACHINERY AND APPLIANCES.—Force pump. Hydraulic press. Hydraulic jack. Hydraulic cranes and lifts. Thomson's jet pump. Venturi and other meters.

Higher Examination.

MECHANISM AND MACHINES.—Lower and higher pairing; sliding and rolling contact. Link mechanisms in general. Velocity and acceleration diagrams and images. Rolling cylinders and cones and the most general motion of bodies; mechanical integration. Forms of teeth for spur, worm, and helical gearing. Slipping of belts. Centrifugal forces in belts and pulley rims. Theory of flywheels. Friction of journals, pivots, screws, wheel teeth, &c. Dynamical loads on machines, vibration and the effect of friction on vibration. Balancing of machinery.

HYDRAULICS.—Friction and flow in pipes and channels. The changes in pressure and velocity along and across stream lines in water or air. Loss of head along a channel due to change of section and change of direction. Forces set up by the sudden stoppage of flow in a pipe. Rotation in a fluid. Balancing of lifts. Hydraulic ram. Centrifugal pumps. Water turbines. Fans. Hydraulic transmission of power. Ship resistance.

SUBJECT 9.—HEAT ENGINES.

The necessary Tables will be supplied, and candidates will be restricted to the use of these Tables, and will not be allowed to bring with them into the examination room any other Mathematical or Logarithm Tables. Slide rules may be used.

Each candidate at both the Lower and the Higher Examinations will, if necessary, be furnished with a copy of the temperature-entropy diagram, and the candidate will be expected during the examination to make practical use of it in solving some of the problems on water-steam which will be set in the examination paper.

Compulsory questions may be set at the examinations.

Lower Examination.

A candidate will be expected to know generally the fundamental principles governing the transformation of heat energy into mechanical energy by means of heat engines. He must be familiar with the constructive details of heat engines, and be able to produce neat free-hand sketches of the general arrangement and the details of heat plants. For this purpose he should study closely some one form of boiler with the details of the staying, and should sketch all the boiler mountings fitted to secure its safe working. In the same way he should study the constructional details of some one form of steam engine with its pipes, stop valves, relief valve and condensing plant. He should also give attention to the constructional details of gas engines, petrol motors, and oil engines.

He should have some knowledge of the history of the development of heat engines, devoting special attention to Watt's classical researches and improvements, and to the contribution to the theory made by Carnot and Joule. In dealing with the properties of steam he should become familiar with the use of Steam Tables.

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Lecture and exercise work should be carried out in conjunction with laboratory work. The equipment for a suitable heat laboratory need not be expensive. A small steam plant consisting of a boiler and an engine fitted with a surface condenser; a small gas engine, a small oil engine, a petrol motor engine; these together with the necessary measuring instruments, indicators, planimeters, measuring tanks, &c., would provide ample apparatus for the purpose. Visits should be made to works in the district, and indicator diagrams should be taken from engines working under industrial conditions.

The following enumeration of subjects gives a general idea of the course of study which should be followed. The order in which the different parts of the work should be taken is to some extent immaterial.

Energy in its various forms.

Equivalence of the different forms of energy. Joule's equivalent.

The first law of thermodynamics.

General description of a steam plant, including a surface condenser, a feed-water heater, and a superheater.

Calorific value of fuels.

Air supply required per pound of coal. Products of combustion. Methods used to maintain the air supply. Natural draft produced by chimneys. Forced draft produced by fans. Closed ashpits. Closed stokeholds. The locomotive blast pipe. Measurement of draft by the U tube. Pounds of coal which can be burnt per square foot of grate per hour in various types of boiler furnaces.

Transmission of heat from the furnace gases to the water in the boiler. Heating surface. Conditions determining the transfer of heat across the heating surface between the gas and the water in the boiler; radiation from the flame; conduction; convection; influence of the surfaces in contact with the hot gas and the water.

Rate of transmission per square foot of heating surface different at different parts of the heating surface. Transmission of heat from the relatively cool furnace gas to the feed water across the heating surface of a feed-water heater. Economisers.

Transmission of heat from the hottest furnace gas to the steam across the heating surface of a superheater. Different forms of superheaters. Superheaters as applied to marine boilers, locomotive boilers, and land boilers. Separately fired superheaters.

The properties of steam. The steam tables. Heat energy contained in a given weight of dry saturated steam; of wet steam, of steam superheated to a given temperature. Evaporation.

Pounds of fuel required in practice to evaporate one pound of dry saturated steam. As the steam is produced and led by the steam pipe to the engine cylinder its place is taken by an equal weight of water introduced into the boiler through the clack valve by the action of a feed pump or injector. Different forms of feed pumps. Different forms of injectors. Safety valves, and other boiler mountings.

The steam engine cylinder; the place where a part of the heat energy carried by the steam is transformed into mechanical work.

The indicator diagram. The indicator and the indicator rig.

The points of cut-off, release, compression, and admission, expressed as percentages of the stroke.

The average effective pressure. Calculation of the horse-power. Addition to a diagram of the axes of zero pressure from the barometer reading at the time the diagram was taken, and the axis of zero volume which requires that the clearance volume be known. Determination of clearance volume.

The pressure and volume of the steam in the cylinder can be read off at any point on the diagram when these axes are added. The corresponding weight of steam present can be found only if the state of the

steam is known also. If it is dry and saturated, as is probable on the compression curve, the weight can be found from the steam tables.

The hypothetical indicator diagram corresponding to a given cut-off, release, compression and admission. The different forms of expansion curve.

Work done per cubic foot of steam. How it depends upon the back pressure. Best cut-off.

Difference between the weight of steam fed to the cylinder and the weight accounted for by the indicator diagram. Condensation. Leak. Steam jackets. Drainage of cylinders. Reduction of the difference by superheating; by carrying out the expansion in stages in two or more cylinders. The compound engine. Arrangement of cylinders in two-stage two-cylinder engines; in three-stage three-cylinder engines; in two-stage three-cylinder engines; in three-stage four-cylinder engines; in four-stage four-cylinder engines.

The surface condenser. Transmission of heat from the exhaust steam across the heating surface of a surface condenser to the water circulating through the condenser. The circulating pump. The air pump. The hot well. Different forms of condensers. The jet condenser; cooling ponds. Cooling towers. Water supply required in given conditions or of steam condensed by given water supply.

Testing steam engines. Brake horse-power. Different forms of brakes. Mechanical efficiency. Thermal efficiency of engine, of a boiler; of the steam plant. Methods of stating performance.

The slide valve. Steam and exhaust laps. Negative lap. Inside and outside steam admission. Trick valve. Double-ported valve. Balancing position. Balanced slide valves. Piston valve. Corliss valve.

The crank and connecting rod. Piston displacement curves. The simple eccentric valve gear. Eccentric sheave. Eccentric strap. Eccentric rod. Angular advance. Angular lag. Displacement diagram for the valve centre. Diagram showing simultaneous displacements of valve and piston on a crank angle base. The valve diagram. The Zeuner diagram; the Reuleaux diagram. The Bilgram diagram. Problems on the slide valve and steam distribution in the cylinder.

Valve gears with independent cut-off valves, and problems connected therewith. The Meyer gear. The Corliss gear. Trip gears like the Sulzer gear.

Reversing motions. A general knowledge of the link motion: the Joy gear and the Walschaert gear.

Governors. The Watt governor. The loaded governor. The spring loaded governor. Shaft governors. The combination of governor and trip gear.

Flywheels.

The crank effort diagram. The inertia forces in reciprocating motion. The pressure exerted at the crosshead pin to drive the engine after correction for back pressure and inertia force. The torque or turning couple on the crank shaft. The effect of the flywheel in regulating the speed. Fluctuation of speed in relation to the energy in the flywheel. Reversal of thrust.

Balancing of engines. Balancing of revolving masses. Balancing of reciprocating masses. Questions in the Lower Examination will be limited to simple cases where the reciprocating masses are assumed to move with simple harmonic motion.

Balancing of a locomotive. Balancing of a marine engine.

Balancing can in general only be properly carried out if there are at least four lines of parts.

Steam turbines. The flow of steam. Nozzles, the expanding nozzle. The Laval turbine. The Laval flexible shaft. The Parsons turbine. The Curtis turbine.

Fundamental rules about turbines. Work done per pound of steam flowing to the wheel.

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Internal combustion engines. Gas engines. Fundamental laws of gases. Properties and calorific values of town gas and producer gas. Air required for complete combustion; excess air. Oil engines. Calorific value of oil fuel. Different forms of oil engine.

The Otto cycle. The indicator diagram. Average effective pressure and corresponding horse-power. Brake horse-power. Mechanical efficiency. The petrol engine. Carburettors. Water circulation. Sparking plugs. Methods of producing the spark. Advancing the spark. Control.

During the teaching of this subject the students should as soon as possible be familiarised with the notions of the second law of thermodynamics, and the way it operates to limit the amount of heat energy which can be converted into mechanical energy. The law should be explained in connection with the efficiency of a perfect heat engine, and as early in the course as possible the temperature-entropy diagram should be introduced and put into use in connection with various problems.*

Higher Examination.

A more extended knowledge of the subjects enumerated in the syllabus for the Lower Examination will be required, and questions may be set in any of the subjects included in that syllabus.

In addition a candidate should follow a course of study outlined in the following syllabus:—

The first and second laws of thermodynamics. Joule's experiments. The efficiency of the Carnot engine. Carnot's cycle reversed. Reversible engine. Carnot's principle. Efficiency of perfect heat engine. Condition of maximum efficiency. Regenerators. Stirling's engine.

Formation of steam under constant pressure and otherwise than under constant pressure. Isothermal and adiabatic curves for steam. Carnot's cycle with steam for a working substance. Rankine cycle. Efficiency of a perfect steam engine working on the Rankine cycle for the case of wet-dry saturated and superheated steam. Absolute temperature. Calculation of the density of saturated steam.

Entropy. Entropy of steam. Temperature-entropy diagram, and its applications.

Refrigerating machinery. Vapour compression machines.

Coefficient of performance. Bell-Coleman machine.

Transmission of power by compressed air.

Testing steam engines. Ratio between the actual efficiency and the efficiency of the corresponding Rankine engine of comparison.

The distribution of steam effected by a link motion for a given setting of the reversing wheel or lever. Valve diagram for a link motion. Problems connected with the design of a link motion. Problems connected with the design of radial valve gears. Valve diagrams for radial valve gears.

Balancing of engines and the vibration caused by unbalanced engines. Secondary balancing. The Yarrow-Schlick-Tweedy engine.

Inertia stresses in the parts of an engine. Inertia stresses in the connecting rod and in the coupling rod. Design of a coupling rod considered as a laterally loaded strut. Inertia stresses in crank shafts. Torsional oscillations of crank shafts. Centrifugal whirling of shafts.

Errors in indicator diagrams due to the inertia of the parts, pencil friction and the stretching of the cord.

Actual behaviour of steam in the cylinder. Wall action. Condensation and re-evaporation. Curve on the indicator diagram representing

* The Board of Education publish a Temperature-Entropy Diagram Sheet for Water-steam which affords a means of solving problems on steam quickly and accurately. The Sheet ought to be used under dulled glass so that pencil lines drawn for each problem may be sponged out. Copies of the Sheet may be purchased, either directly or through any Bookseller, from Messrs. Wyman and Sons, Limited, Fetter Lane, London, E.C.4, and 54, St. Mary Street, Cardiff; or H.M. Stationery Office (Scottish Branch), 23, Forth Street, Edinburgh; or E. Ponsonby, Limited, 116, Grafton Street, Dublin.—Price one penny.

water present during expansion. Influence of speed, size and ratio of expansion. Advantages of compound expansion, and superheating.

Calculations of air supply required for a fuel the analysis of which is given. Calculation of the air actually supplied to a furnace from an analysis of the flue gas. Methods of determining the calorific value of a fuel. Methods of analysing flue gases. The corrosion of boilers. Water softening and water softening plant.

Steam turbines. Details of construction. Determination of blade angles from given data. Strength of rapidly rotating wheels, discs and drums.

Thermodynamic efficiency of internal combustion engines.

Standard cycles. The air standard cycle. Calculations relating to heat transference between the working substance and the jacket water of internal combustion engines. Effect of the compression ratio on the efficiency. Testing internal combustion engines. Measurement of gas and air supply. Analysis of exhaust gases. Weight of charge in a gas engine.

A student should by the working of many examples get a thorough knowledge of the way to calculate the heat absorbed or rejected by a working substance during a change of state. Many examples may with advantage be worked in connection with this by application of the first law of thermodynamics to the case of a gas whose characteristic equation is known.

With regard to the construction of heat engines a student will be expected to have sufficient knowledge of the strength of materials and applied mechanics to work out the sizes of the principal members of an engine. He should also be able to fix the chief dimensions of a steam plant of given power. In particular the sizes of engine cylinders to produce a given horse-power when speed, pressure, and steam distribution are given.

SUBJECT 10.—BUILDING CONSTRUCTION.

The instruction given should be so arranged that by the time the student finishes his course of study, he should have acquired a knowledge of building materials, plant and construction sufficient for the work upon which he is likely to be engaged.

In order that he may be able to make free use of this knowledge in practice, he must also be a good draughtsman; good drawing is an essential part of the course, but it must always be borne in mind that drawing is a means and not an end in itself; drawings of work to be carried out should be such as to give full information and exact guidance to workmen who may have to use them. Candidates for the Higher Examination should have acquired proficiency in making finished drawings as well as what may be called descriptive and explanatory sketches.

All students should practise freehand drawing of details from their own measurements of actual parts so that they may be able readily to make a neat dimensioned sketch from which a drawing to scale might afterwards be prepared, or which may itself be sufficient for purposes of explanation. The use of squared paper may be introduced with advantage in exercises of this kind.

A larger number of questions will be set in the examination papers than the candidate will be allowed to attempt, so that he may have some range of selection of questions which bear upon branches to which he has given special attention.

It should be seen that candidates are fairly provided with pens, ink, pencils, and drawing instruments (including T and set squares, drawing boards, &c.) when they present themselves for the examination. The use

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in examination of the ordinary boxwood, ivory, or paper scales and protractors, and slide rules, is permitted.

Mathematical Tables will be provided with the Higher Examination papers.

Compulsory questions may be set at the examinations.

Lower Examination.

The Course of Instruction should cover a good general knowledge of all the subjects connected with ordinary building construction, together with simple exercises in calculating quantities of materials. These calculations are not such as a Quantity Surveyor would make, but such as would have to be made by a Foreman of Works who has to order sufficient materials for the amount of work which he knows has to be done.

The class lessons and drawing practice should include the following subjects:—Excavation in various kinds of soils, including strutting and planking, concrete foundations for walls and piers, the use of damp courses and the materials employed for them; gauged brickwork; hollow walls and the various methods of bonding them together; junctions of walls of various thicknesses and at different angles; chimney breasts and flues; the various bonds of brickwork, including irregular bonds; fire-proof construction in floors and roofs; the best known building stones, their quarrying, bedding, cutting and dressing, and the various kinds of masonry in walls, window dressing, copings, &c.; characteristics of timber, its conversion and seasoning. Attention should be given to the increasing use of machinery in treating timber for carpenters' and joiners' work; advanced carpentry and joinery; ordinary forms of staircase construction with close strings and bent strings; two and three-light windows with cased frames and hung sashes, and also with solid frames, mullions and transoms, and casements; outside doors with bolection mouldings, sashes, doors and the finishings of door and window openings; all kinds of timber roof trusses and the various finishings in eaves, hips, ridges, &c.; the nature, qualities and weights of various kinds of roofing materials; elementary drainage; the laying and jointing of glazed stoneware pipes; all kinds of plumbers' work, including cold water supply to cisterns, and the position of the same in a house; bath, sinks, water-closets and their connections, waste pipes, soil pipes, ventilation pipes, &c.; all kinds of plastering, including the composition of the various coats; scaffolding for large buildings, shoring, strutting, needling, and under-pinning; centring for arches up to 15 feet span; the general principles of loaded beams; the use of the triangle and polygon of forces in order to determine practically the resultant force in direction and magnitude, and to resolve such a resultant into its component forces; the determination of the stresses in simple braced structures; elementary exercises in the calculation of strength of materials.

In all these subjects practical examples of the materials used and the various operations of dealing with them should be brought before the student, either in the class room or elsewhere; in as many cases as possible, he ought actually to see and handle full-size examples of everything in which he is being instructed theoretically. He should also familiarise himself with the nature and use of all the tools used in building operations. Teachers should make a point of accompanying their students for practical inspection of any building operations going on in their locality. Every student ought to examine in detail the structure of the buildings in which he lives, works, or attends classes.

Higher Examination.

A more extended knowledge of the subjects enumerated in the syllabus for the Lower Examination will be required together with a knowledge of the following subjects:—

Foundations—natural and artificial, upon land and under water; damp courses and their treatment.

Terra-cotta and artificial stone; their manufacture and uses.

Principles of sanitation; drains, traps, gulleys, disconnecting chambers, sewers, their ventilation and drain connections, iron drains. Drain testing and ventilation.

Masonry. Character of various stones used in building and localities where found, how to test for quality and bed, fitness of various stones for different atmospheres, weight generally, approximate strength and chemical composition; stone stairs, composite walls, arches.

More detailed knowledge of scaffolding, including gantries, elaborate centring, framing for concrete walls and modern methods of hoisting materials, roofing up to 60 feet span. Timber: its seasoning, diseases, causes of decay, and means of preserving it. Roof timbering, open, hammer beam and composite trusses. Modern iron trusses including trussed purlins; all roof finishings, including slating, tiling, plumbing, &c., skylights and lanterns. Wood stairs of all kinds, including hand-railing.

Ventilation and heating; hot water supply; provisions for gas and electric supply, in so far as these may affect the structure of the building; water supply; lightning conductors; various kinds of glass and glazing; plastering in all its branches.

General properties of cast iron, wrought iron, and steel.

Safe working stresses for working loads.

Factors of safety.

Design of ties, struts, and stanchions.

Bending moment and shearing force diagrams. Stresses in beams and girders corresponding to given conditions of loading. The design of beams and girders.

Determination of stresses in the members of framed structures by means of reciprocal figures, and application to braced girders, and roof principals.

Details of the construction of brace girders, plate girders, and roof principals.

Design of riveted joints, pin joints, and bolted joints.

General design of the structure for a steel frame building.

Ferro-concrete with some of its simpler applications.

Design of retaining walls, fireproof floors, and deep foundations.

Candidates should be able to write a specification for any of the materials used in building construction, including iron, steel, and concrete, and they should also know the proper tests to apply to secure that the materials fulfil the specifications.

SUBJECT 11.—NAVAL ARCHITECTURE.

The students should be encouraged to make good rough sketches of the different parts of a ship's structure approximately to scale, using squared paper; they should also be impressed with the necessity of noting any detail of work brought before their notice daily in the shipyard. Questions will be set in the examination which require rough sketches of parts of a vessel to be given from memory.

If the class is held in an institution which possesses a testing machine, the students ought to be allowed to use it occasionally to test samples of materials used in shipbuilding.

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All students should be provided with suitable scales, set squares, and ship curves, and candidates should bring these for use at the examination.

Tables of logarithms, functions of angles, and useful constants will be provided, and candidates will be restricted to the use of these tables, and will not be allowed to bring with them into the examination room any other Mathematical or Logarithm Tables. Sliding rules may be used.

Compulsory questions may be set at the examinations.

Lower Examination.

I. PRACTICAL SHIPBUILDING.—The tests to which the various materials used in shipbuilding are subjected, and the defects to which those materials are liable; the tools and appliances used in ordinary shipyard work, and the general arrangement of blocks, staging, derricks, &c., used on a building slip; plans of flat and vertical keels, inner bottom, shell, deck and other plating; framing, beam, keelson, and stringer plans; watertight and other bulkheads; ceiling and wood decks; pillaring arrangements to secure clear holds, and details of cargo hatchways to meet Lloyd's Rules; rudders, stern frames, and spectacle arrangements for twin-screw ships; bilge keels; supports to engines, boilers, and shafting; masts and derricks; precautions necessary to prevent deterioration of the hull of a ship while building, and while on service; method of docking ships, how they are placed in position and supported.

II. LAYING OFF.—A knowledge of the work carried on in the Mould Loft for the purpose of fairing a set of lines, including traces of keelsons and longitudinals, edges of shell plating, tank margins, ribbands, &c., and transferring the frame and other lines to the scribe board; lifting the bevels and constructing round of beam mould; a ship's block model and the information necessary for its construction; obtaining the dimensions for ordering the shell plating, frames, beams, floors, inner bottom plating, &c.; making and marking ribbands; fairing the edges of shell plating on the frames; making templates or skeleton patterns for stern, sternpost, propeller bracket forgings or castings.

III. DRAWING.—Plotting of curves of displacement, tons per inch immersion, I.H.P., &c., from given data. A rough freehand dimensioned sketch may be given at the examination, requiring candidates to make finished scale drawings, and candidates will be expected to be able to draw, from their own knowledge, the fastenings suitable for connecting together the parts which are the subject of the example.

IV. SHIP CALCULATIONS.—Calculation of the weights of simple parts of a ship's structure; spacing and strength of iron and steel rivets; calculation of the strength of the simple parts of a ship's structure, such as tie plates, butt straps and laps; tons per inch immersion; change of trim, and moment to change trim; change of trim due to moving weights on board, and that due to the addition or removal of weights; the principles and use of Simpson's and other rules for finding the area and position of the centre of gravity of a plane area, and for calculating the position of the centre of buoyancy; graphic methods of finding displacement and position of the centre of buoyancy; curves of displacement and of tons per inch immersion; the fundamental conditions to be fulfilled in order that any body may float freely and at rest in still water; centre of flotation, metacentre, metacentric height, stable and unstable equilibrium; definitions of block, prismatic, water-plane, midship area, and other similar coefficients.

Higher Examination.

I. PRACTICAL SHIPBUILDING.—The structural arrangements necessary to resist longitudinal and transverse stresses to which ships are

liable in still water and amongst waves, and the arrangements to resist local stresses; description and rough hand sketches of detail fittings of ships, such as anchor and capstan gear, steering gear, and other appliances used in working a ship; davits and fittings in connection therewith; ventilating and coaling arrangements; pumping and draining; the fundamental types of vessels and modifications thereto, the distinctive features of such vessels and consequent effect on freeboard; methods of determining the sizes of structural parts and of detail fittings, making out midship sections to the Rules of the principal classification Societies for various types of vessels; methods of fitting up refrigerating spaces for shipment of frozen and chilled meat, fruit, &c.; construction of oil fuel bunkers, and of vessels for carrying oil; launching arrangements, and the diagrams and curves generally used in connection therewith.

II. LAYING OFF.—Expanding the plating of longitudinals and margin plates by the geometric and mocking up methods; expanding stern plating, rudder trunking, and mast plating; obtaining the true shape of a hawse hole in the deck or shell, and similar practical problems; constructing and fairing the form of a twin screw bossing.

III. SHIP CALCULATIONS.—Displacement sheet and arrangement of calculations made thereon; proofs of Simpson's and other rules for obtaining areas and moments; displacement and deadweight scales; approximate and detailed calculations relating to the weight and position of the centre of gravity of hull; calculations of weight and strength of parts of a ship's structure such as decks, bulkheads, framing, side and bottom plating, &c., also the strength of fittings such as boat davits, derricks, &c.; coefficients of weight of hull, outfit, and machinery for a few of the principal types of ships, also coefficients of position of the centre of gravity of the ships; curves of loads, shearing forces, and bending moments for a ship floating in still water, and amongst waves, also equivalent girder and stress in the material; calculations of the positions of transverse and longitudinal metacentres; consideration of the curves of centres of buoyancy, centres of flotation, and pro-metacentres; the construction and use of metacentric diagrams; Atwood's and Moseley's formulæ, and methods of calculating stability based thereon; the construction and use of curves of stability; inclining experiment and the precautions that must be taken to ensure accuracy; change of draught and trim due to passing from fresh into salt water and vice versa; effect upon trim and stability due to flooding compartments of a ship; effect of free surface on the stability of vessels carrying liquid cargo; methods of determining the size of rudder-heads, and the stresses on rudders balanced and unbalanced; resistance of ships; Froude's experiments on skin friction; Froude's law of comparison for vessels at corresponding speeds; methods of calculating the horse-power to propel a vessel of known form at a given speed; effective horse-power, propulsive coefficient and Admiralty constants, and values of the two last in typical cases; speed of ships on trial, methods adopted and precautions necessary to obtain accurate speed data; progressive trials and their uses; elementary considerations of the oscillations of ships in still water and amongst waves; definitions of a "stiff" and "steady" vessel, and elements of design affecting these qualities; tonnage of ships, how measured, &c.

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*GROUP C.—PHYSICS.***SUBJECT 12.—HEAT.****Lower Examination.**

Candidates will be expected to have an elementary knowledge of subsidiary subjects, such as Mathematics, Mechanics, Sound, Light, Magnetism and Electricity, so far as they relate to the subjects included in this syllabus. Simple problems may be set involving the application of elementary laws and formulæ. The candidate will be expected to have some practical acquaintance with simple forms of apparatus and methods of measurement and with the graphic representation of the results of observation.

THERMOMETRY.—Construction and graduation of thermometers. Sources of error of the mercurial thermometer, and simple corrections.

EXPANSION.—Solids—linear and cubical. Methods of measurement. Practical applications. Liquids—absolute and apparent expansion. Methods of measurement. Gases—relation between pressure, volume and temperature. Gas thermometer at constant volume and constant pressure. Gas scale of temperature.

CALORIMETRY.—Units of heat. Specific and atomic heat. Calorimeters. Methods of measuring specific heats of solids, liquids and gases.

MECHANICAL EQUIVALENT OF HEAT.—Measurement of heat developed by friction. Ratio and difference of specific heats of gases. Adiabatic expansion. Method of Clement and Desormes. Calculation of the equivalent from the velocity of sound.

TRANSFERENCE OF HEAT.—Conduction, convection and radiation. Conductivity. Theory of Exchanges. Newton's law of cooling. Stefan's law of radiation. Absorption, emission, and reflection of non-luminous radiation.

FUSION AND SOLIDIFICATION.—Melting-points. Latent heat. Ice calorimeters. Change of volume and effect of pressure.

VAPORISATION AND LIQUEFACTION.—Evaporation and ebullition. Spheroidal state. Pressure and density of saturated vapours. Dalton's laws. Hygrometry. Dew point and hygrometric state. Latent heat, total heat, and specific heat of steam. Steam calorimeter. Liquefaction of gases and vapours. Critical temperature.

ELECTRICAL THERMOMETRY.—General principles of galvanometer, thermocouple, thermopile, electrical resistance thermometer and bolometer.

Higher Examination.

The examination will consist of a written paper in which questions may be set on any branch of the subject, including thermo-dynamics and its relations to other departments of Physics. A knowledge of Higher Mathematics such as differential equations, Fourier analysis, &c., will not be regarded as essential, but it is most desirable that students should be acquainted with the elementary applications of the calculus to physical problems. Candidates will be expected to show knowledge of experimental methods and manipulation which cannot be obtained satisfactorily without laboratory training.

SUBJECT 13.—MAGNETISM AND ELECTRICITY.
Lower Examination.

Candidates will be expected to have an elementary knowledge of subsidiary subjects, such as Mathematics, Mechanics, Heat and Light, so far as they relate to the subjects included in this syllabus. Simple problems may be set, involving the application of elementary laws and formulæ. The candidate will be expected to have some practical acquaintance with electrical apparatus and methods, and with the graphic representation of the results of observation.

MAGNETISM.

PROPERTIES OF MAGNETS AND MAGNETIC SUBSTANCES.—Poles and arm of a magnet. Law of force between poles. Strength of pole. Unit pole. Magnetic moment. Intensity of magnetisation. Method of comparison of magnetic moments by oscillation and deflection.

MAGNETIC FIELD.—Strength of field. Lines of force. Methods of delineation. Field of a small linear magnet, end-on and broadside-on. Terrestrial magnetic elements, dip, declination, and horizontal force.

MAGNETIC INDUCTION.—Curves of magnetisation for soft iron and hard steel. Residual magnetism, coercive force, permeability. Molecular theory. Effect of temperature on a magnet. Critical temperature of iron. Diamagnetism.

ELECTROSTATICS.

ELECTRIFICATION BY FRICTION.—Positive and negative developed in equal quantities. Law of attraction and repulsion. Unit charge. Torsion balance. Gold-leaf electroscope. Conductors and insulators. Frictional machines.

ELECTROSTATIC INDUCTION.—Tubes or lines of force. Hollow conductors. Electric density. Action of points. Electrophorus. Induction machines.

ELECTROSTATIC ENERGY.—Work done in separating parallel plates with equal and opposite charges. Difference of potential. Electrometers. Capacity of parallel plate condenser. Leyden jar. Specific inductive capacity. Heat of electric discharge.

ELECTRIC CURRENT AND TECHNICAL APPLICATIONS.

PRODUCTION OF CURRENT BY CHEMICAL ACTION.—Types of voltaic cells. Constant or standard cells. Electromotive force. Definition of the volt by reference to Clark or Weston cell.

ELECTROLYSIS.—Polarisation. Voltmeters. Calibration of ammeters by electro-deposition.

ELECTRIC CIRCUIT.—Ohm's law. Practical units and standards of resistance. Methods of measurement based on Ohm's law. Potential balance or potentiometer. Divided circuit. Wheatstone's bridge. Specific resistance. Variation of resistance with temperature. Electrical thermometers.

MAGNETIC MEASURE OF CURRENT.—Absolute definition of the ampere. Field at the centre of a circular coil. Tangent galvanometer. Astatic and moving coil galvanometers.

ELECTROMAGNETIC ENERGY.—Heating effect of current. Joule's law and its verification. Units of work and power. Thermoelectric currents.

MAGNETIC CIRCUIT OF ELECTROMAGNET.—Field inside a solenoid. Magnetic flux, magnetomotive force, and magnetic resistance.

ELECTROMAGNETIC INDUCTION.—Work done in moving a circuit carrying a current in a magnetic field. Induced electromotive force and current. Induction coil. Earth inductor. Ballistic galvanometer. Measurement of magnetic flux, and comparison of capacities.

TECHNICAL APPLICATIONS.—General principles of construction and description of simple forms of continuous current dynamos and motors; instruments used for measuring and testing; transmitters and receivers

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employed in telegraphy and telephony; lines for transmission of electric signals or power; electric lighting by arc and incandescent lamps; electric meters, switches, keys, cut-outs, and accessory apparatus; methods of electro-deposition and simple electro-chemical processes; operation of storage batteries.

Higher Examination.

The examination will consist of a written paper in which questions may be set on any branch of the subject, in its relation to other branches of Physics. A knowledge of Higher Mathematics, such as differential equations, will not be regarded as essential, but it is most desirable that candidates should be acquainted with the elementary applications of the calculus to electrical problems. Candidates will be expected to show a knowledge of experimental methods and manipulation, which cannot be obtained satisfactorily without practical training in the laboratory.

GROUP D.—CHEMISTRY.

SUBJECT 14.—INORGANIC CHEMISTRY.

These examinations consist of written tests only,* but knowledge of practical chemistry will be tested both in the Lower and Higher Examinations by requiring candidates to describe, with all essential practical details, processes commonly carried out in the laboratory.

The outlines of laboratory work have been drawn up with the view of indicating the general nature of the laboratory training in Inorganic Chemistry which students should have received before presenting themselves for examination in this subject.

Compulsory questions may be set at the Examinations.

Lower Examination.

This syllabus prescribes the subjects of which a general knowledge is required; it does not prescribe the order in which they should be taught, but leaves this to the discretion of the teacher. So far as is possible the subjects of this syllabus should be illustrated by experiments, made either in the presence of the class by the teacher, or by the student in the laboratory, and a knowledge of the conditions under which the more important experiments can be made will be expected. It is most desirable that students should be trained to draw deductions from experiments they have made or have witnessed, instead of committing to memory conclusions drawn for them by their teacher or text-book.

The chief characteristics of chemical action, and the differences between chemical and physical changes. Distinction of mixtures, compounds and elements. The law of the conservation of matter.

Air studied as a mixture of (mainly) two gases. The relation of air to combustion. Removal from air of its active constituent. Isolation of this active constituent from air by means of mercury or litharge. History of the discovery of oxygen, and of the recognition of the part played by oxygen in ordinary combustion.

Water studied as a compound of two gases. Isolation of hydrogen from water by chemical means. Production of water by the combustion of hydrogen in oxygen or air. Production of water and the metal by heating a metallic oxide in hydrogen.

* Examinations in Practical Inorganic Chemistry, as a separate subject, are, however, held for Scholarship candidates in the Competitive Examinations for Royal Scholarships, &c., and for Sir Joseph Whitworth's Scholarships and Exhibitions.

Oxygen and hydrogen studied as elements. Their preparation from common materials and their more important properties.

The physical properties of gases. Physical differences, such as colour, density, solubility, &c. between air and other gases. Effects of heat and of pressure on the volume of a gas. Reduction of gaseous volumes to standard temperature and pressure. Diffusion of gases.

Laws of chemical combination. The law of constant proportion. The law of multiple proportion. The law of combination of gases by volume. Determination of the composition of water by weight, and of steam by volume. Combustion of carbon and sulphur in oxygen without change of volume.

Theories of chemical combination. Dalton's atomic theory. Avogadro's hypothesis. The distinction between a law and a theory. Equivalents. Atomic and molecular weights. Molecular formulæ. Use of symbols and equations. Calculation of quantities by weight or volume from formulæ.

Classification of elements as metals or non-metals broadly from their physical properties, and from the properties of the compounds they form with oxygen and with hydrogen. Comparative study of groups of elements and their more prominent compounds, as illustrated by the alkaline earths, the nitrogen group and the halogens. Allotropy.

The properties of water as a solvent for solids, liquids and gases. The effects of dissolved substances on its physical properties—electrolysis. Outline of the theory of acids, bases and salts. Solvent action of water on metals. Hard and soft water.

Hydrogen peroxide and ozone. Their preparation, more important properties, and composition.

Nitrogen and its compounds with oxygen and hydrogen. Preparation, properties and composition of nitrous oxide, nitric oxide, nitrogen peroxide, nitric acid, and ammonia.

Atmospheric air, its principal constituents, and the methods by which their relative proportion can be ascertained.

The halogen group of elements: chlorine, bromine and iodine. Their occurrence, preparation and properties. Their hydrides, oxides and oxy-acids. Fluorine and hydrogen fluoride.

Carbon and silicon. Their occurrence in nature and properties. Their hydrides, chlorides, oxides and acids. Silicon fluoride. Methane, ethylene and acetylene as typical hydrocarbons. Homology.

Boron, boron trioxide, boric acid, boron fluoride.

Sulphur. Its occurrence in nature and properties. Its hydride, oxides and oxy-acids. Outline of the lead chamber and contact methods for the production of sulphuric acid. Catalysers, and their influence on the velocity of chemical interactions.

The nitrogen group of elements. Phosphorus, arsenic, antimony and bismuth. Their occurrence, preparation and properties. The compounds they form with chlorine, hydrogen and oxygen studied comparatively with those of nitrogen.

Metals and the chief sources from which they are obtained. Outline of chemical or electrical processes for the production of metals from oxides, carbonates, sulphides, or halogen compounds. The commoner alloys. The oxides, hydroxides and more important salts of the following metals:—

- (i) sodium and potassium;
- (ii) calcium, strontium and barium;
- (iii) magnesium, zinc, cadmium and mercury;
- (iv) aluminium;
- (v) tin and lead;
- (vi) chromium, manganese, iron, cobalt and nickel;
- (vii) silver, gold, platinum, and copper.

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The application, for the purposes of qualitative analysis, of differences in properties, solubility and the like of nearly related compounds.

OUTLINES OF LABORATORY WORK.

(a) Simple quantitative experiments designed to illustrate the laws of chemical change, the nature of combustion, the composition of water and the determination of equivalents.

(b) Preparation of gaseous elements and compounds included in the syllabus for the Lower Examination and of simple and double salts in the crystallised state from metals, alloys and minerals.

(c) Qualitative recognition of simple substances.

(d) Volumetric determinations usually made with acid and alkali, permanganate and silver nitrate.

Higher Examination.

Candidates will be examined more fully upon the subjects included in the syllabus for the Lower Examination, and in addition upon the following subjects:—

Cyanogen, hydrocyanic acid and the cyanides. Cyanic acid and the cyanates. Ferrocyanides, ferricyanides and sulphocyanides (thiocyanates). The carbonyls of the metals.

Classification of the elements—the Periodic law—Valency. Relations between atomic weight and specific heat, and between atomic weight and crystalline form. Isomorphism—Methods of determining atomic weights. The value of vapour density determinations and modes of carrying them out.

Helium, argon, and the other inert gases of the eighth group. Radium and radio-activity; their bearing on the nature of the atoms.

Spectroscopy, and its use in the identification of the elements. The more important general principles of physical chemistry. The laws governing the relation between the volumes and the pressures of gases. Van der Waals' equation. Dissociation of gases. Specific heat of gases at constant volume and constant pressure. Liquids, their nature and relation to gases; critical phenomena and liquefaction of gases.

Osmotic pressure, its measurement and use in determination of molecular weights. The nature of solids. Determination of molecular weights by the lowering of the freezing point and rise in boiling point of solutions. Thermochemistry. Heats of formation and combustion and their determination. Law of mass action. The Phase rule and examples of its application. Velocity of reaction. Catalysis. Electrolytic conductivity, electrolysis and electrolytic dissociation. The nature of solution. Hydrolysis.

Candidates will be required to have a general knowledge of the processes in use for the production of the following substances on the large scale, and to be able to illustrate their answers by sketches:—

Oxygen.	White lead.
Chlorine, bromine, iodine.	Iron and steel.
Phosphorus.	Copper.
Bleaching powder.	Lead.
Sulphuric, hydrochloric and nitric acids.	Mercury.
Sodium carbonate, bicarbonate and caustic soda.	Silver and gold.
Lime.	Zinc.
Calcium carbide.	Aluminium.
	Sodium.
	Cyanides.

OUTLINES OF LABORATORY WORK.

- (a) Qualitative recognition of the constituents of mixtures of inorganic substances, and of the more simple minerals.
- (b) Gravimetric and volumetric determinations of the principal metallic and acidic radicals, including the analysis of a few typical alloys and minerals.
- (c) Electrochemical methods for the preparation and analysis of inorganic substances.
- (d) Calibration and use of apparatus for such physico-chemical operations as the determination of molecular weights, conductivity of solutions, velocity of reactions and spectra.

SUBJECT 15.—ORGANIC CHEMISTRY.
CHEMISTRY OF CARBON COMPOUNDS.

These examinations consist of written tests only,* but knowledge of practical chemistry will also be tested both in the Lower and Higher Examinations by requiring candidates to describe, with all essential practical details, processes commonly carried out in the laboratory.

The outlines of laboratory work have been drawn up with the view of indicating the general nature of the laboratory training in Organic Chemistry which students should have received before presenting themselves for examination in this subject.

Compulsory questions may be set at the Examinations.

Lower Examination.

This syllabus prescribes the subjects of which a general knowledge is required; it does not prescribe the order in which they should be taught, but leaves this to the discretion of the teacher. So far as is possible, the subjects of this syllabus should be illustrated by experiments, made either in the presence of the class by the teacher, or by the student in the laboratory, and a knowledge of the conditions under which the more important experiments can be made will be expected. It is most desirable that students should be trained to draw deductions from experiments they have made or have witnessed, instead of committing to memory conclusions drawn for them by their teacher or text-book.

INTRODUCTION.

Properties of the element carbon which render necessary the separate study of its compounds. Methods for the analysis of organic compounds, and for determining the molecular weights of volatile and non-volatile substances. Empirical, molecular, and structural formulæ. Homology and isomerism. Division of the subject into two parts for purposes of convenience—acyclic or aliphatic, and cyclic or aromatic compounds.

ACYCLIC OR ALIPHATIC COMPOUNDS.

Methods by which petrol, alcohol, glycerol, chloroform, ether, acetic acid, tartaric acid, cane sugar, and glucose are manufactured. Methods by which the structure of typical acyclic compounds such as ethyl alcohol, ethyl ether, acetaldehyde, acetone, acetic acid, lactic acid, glycerol, tartaric acid and urea, has been determined.

* Examinations in Practical Organic Chemistry, as a separate subject are, however, held for Scholarship Candidates in the Competitive Examinations for Royal Scholarships, &c.

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HYDROCARBONS.—Paraffins: methane, ethane, propane, and butane. Olefins: ethylene and propylene. Acetylene. Their preparation and distinctive characters.

HALOGEN DERIVATIVES.—Methyl and ethyl chloride, bromide, and iodide. Ethylene and ethylidene dichloride. Ethylene dibromide. Chloroform and iodoform. Carbon tetrachloride.

ALCOHOLS.—Monohydric alcohols: methyl, ethyl, propyl, and butyl alcohols. Primary, secondary and tertiary alcohols. Fusel oil. Rectified, proof and methylated spirit. Allyl alcohol. Polyhydric alcohols: glycol, glycerol, and mannitol.

ETHERS.—Methyl and ethyl ether.

ALDEHYDES AND KETONES.—Formaldehyde and acetaldehyde. Acetone.

ACIDS.—Monobasic acids: formic, acetic, propionic, butyric, palmitic and stearic acid. Acrylic acid.

Polybasic acids: oxalic and succinic acid.

Hydroxy-acids: glycollic, lactic, tartaric and citric acids; their preparation and distinctive characters.

Acetyl chloride, acetic anhydride and acetamide. Urea.

ESTERS.—Ethyl acetate and oxalate. Ethyl hydrogen sulphate. Common fats.

AMINES.—Methylamine and ethylamine. Primary, secondary, tertiary, and quaternary compounds.

CYANOGEN COMPOUNDS.—Hydrogen cyanide and potassium cyanide. Acetonitrile and methylcarbamine.

METALLIC COMPOUNDS.—Zinc methyl, magnesium methyl iodide, cacodyl.

CARBOHYDRATES.—Cane sugar, glucose, fructose, maltose, and starch.

CYCLIC OR AROMATIC COMPOUNDS.

Sources, manufacture and constitution of benzene, toluene, naphthalene, anthracene and phenol; of aniline, resorcinol, and phthalic acid; and of alizarin.

Chloro and nitro-derivatives of benzene and toluene. Benzene-sulphonic acids.

HYDROXY-COMPOUNDS.—Phenol. Nitrophenols. Benzyl alcohol. Catechol, resorcinol and quinol.

AMINES.—Aniline and toluidine. Acetanilide, methyl and dimethylaniline. Benzenediazonium compounds. Phenylhydrazine.

ALDEHYDE.—Benzaldehyde.

ACIDS.—Benzoic acid and the phthalic acids. Cinnamic acid. Hydroxy-acids, especially salicylic acid.

NAPHTHALENE.—Nitronaphthalenes, naphthalenesulphonic acids, naphthols and naphthylamines.

ANTHRACENE.—Anthraquinone and alizarin.

OUTLINES OF LABORATORY WORK.

(a) Qualitative recognition of the elements usually present in organic compounds, and of radicals enabling such substances to be classified as alcohols, acids, amines, amides, aldehydes, ketones, unsaturated, nitro-derivatives, &c.

(b) Preparation in a pure state of not less than six organic compounds of different types.

(c) Fractional distillation, fractional crystallisation, determination of equivalents by gravimetric and volumetric processes.

Higher Examination.

Candidates will be required to show a competent knowledge of the chief groups of carbon compounds, both acyclic (aliphatic) and cyclic (aromatic), including those set out in the syllabus for the Lower Examination and the following :—

CARBONYL COMPOUNDS.—Ketones, ketonic acids, and quinones.

CARBOHYDRATES.—Synthesis of the sugars, and determination of their configuration. Glucosides. Starch.

POLYMETHYLENES (cycloparaffins) and their derivatives.

TERPENES, their derivatives and synthetical preparation.

CAMPHOR, its constitution, and the constitution of the acids produced by its oxidation.

PURINE GROUP.—Uric acid, theobromine, and caffeine.

PYRIDINE.—Synthesis of pyridine, of piperidine, and of coniine.

QUINOLINE.—Synthesis of quinoline and of isoquinoline.

DYE STUFFS.—Azo-dyes, magenta, eosin, and indigo.

ALKALOIDS.—Sources and chief properties of morphine, quinine, cinchonine, and strychnine.

Candidates will also be expected to answer questions set in connection with important problems in Organic Chemistry, including :—

Unsaturation in acyclic and cyclic compounds. Its recognition and interpretation.

Reduction of cyclic compounds, and especially of the phthalic acids.

Fermentation and enzyme actions.

Geometrical, optical, and dynamic isomerism.

Stereochemistry of nitrogen as shown in quaternary compounds and oximes.

Application of physical methods to the determination of structure.

OUTLINES OF LABORATORY WORK.

(a) Quantitative determination of the elements usually present in organic substances, and of such radicals as acetyl, methoxyl, carboxyl and the amino group.

(b) Preparation of a series of related organic substances, or the repetition of a portion of a published research involving the preparation of a series of related substances.

(c) Determination of molecular weights, molecular rotation, velocity of esterification, velocity of hydrolysis, and conductivity.

(d) Laboratory methods for the identification of organic substances.

GROUP E.—COAL MINING AND METALLURGY.

SUBJECT 16.—COAL MINING.*

Lower Examination.

Candidates for this Examination are expected to show a general knowledge of the principles of the subject, together with some knowledge

* This subject cannot be taken in any of the Competitions for Awards in Science.

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of details in the matters of Design and Construction, but they will not be expected to enter into economic considerations. They should be able to make neat sketches in illustration of their answers.

Elementary Petrology; Tectonics of the earth's crust; Faults and other irregularities. Principles of stratigraphical Geology; succession of the Formations. Structure of principal British Coalfields.

Minerals worked under the Coal Mines Regulation Acts; various kinds of Coal, Bituminous coal, Anthracite, Lignite. Stratified Ironstone. Oil shale. Fireclay and Ganister.

Prospecting by means of surface indications and by boring; the simpler (English) percussion drill; the Diamond drill.

Tools and appliances for breaking rock and getting coal by hand and by machinery. Percussive and Rotary drilling machines. Coal-cutting machines. Transmission of power underground. Air compressors.

Blasting and Explosives; methods of charging and firing shots.

Adits and levels; the methods of driving and supporting the same in grounds of various character.

Shaft sinking and supporting shafts in ordinary ground, in heavily watered ground, and in running ground.

The laying out of Collieries and Ironstone Mines. Direction of main roads. Shaft pillars. Ordinary methods of working, bord and pillar, long wall, stall working. Methods of working very thick or highly inclined seams.

Underground transport, and the appliances used therefor. Hand-putting, horse tramping, self-acting inclines, mechanical haulage, locomotives of various kinds. The simpler calculations for underground transport.

Winding, and the appliances and fittings employed, such as winding engines, ropes, guides, pithead frames, cages, buckets, keps; safety appliances; onsetting and banking; balancing the load.

Drainage. Drainage adits. Siphons. Dams and flood doors. Appliances for winding water. Pumps of various kinds for permanent and sinking purposes. Various methods of actuating pumps.

Ventilation. Mine gases. Objects of ventilation. Natural ventilation. Artificial ventilation by furnace and mechanical means. Distribution of air. Regulation of air. Measurement of air currents. The simpler calculations affecting ventilation. Thermometer, Barometer and Hygrometer.

Illumination by candles, lamps, safety lamps, electric lamps.

Higher Examination.

In this Examination an accurate knowledge of details will be required, as well as a knowledge of economic considerations. Candidates should be able to illustrate their answers by dimensioned sketches.

A more complete knowledge of the subjects for the Lower Examination will be expected, together with the following additional matter:—

Leading features of the principal Colonial and Foreign Coalfields; statistics of production.

The various methods of percussive boring with ropes, rigid rods, and water flushing. Various methods of rotary boring. Surveying boreholes.

Management and organisation of labour in mines.

The theory of explosives; substitutes for explosives.

The setting out of straight and curved levels; maintaining gradient and direction.

Selection of shaft site and dimensions; organisation of sinking operations; surface arrangements for sinking. Inclined and rectangular shafts.

Details of special methods of laying out and working difficult seams; organisation of labour in coal getting. Hydraulic stowage.

Surface transport; colliery sidings; aerial ropeways.
 Methods of electric winding; calculation of winding machinery;
 special methods of hoisting.
 Calculation of pumping machinery; efficiency of various types.
 Calculation of ventilating currents and machinery. Fan testing.
 Arrangements of lamp cabins; testing lamps. Firedamp detectors.
 Preparation of Minerals; tipplers, screens, picking belts and tables;
 ordinary methods of coal washing.
 Design and construction of heapsteads and washeries. Special
 methods of cleaning coal. Loading coal.
 Manufacture of coke and of bye-products; beehive, rectangular, retort
 and bye-product ovens; collection and purification of bye-products.
 Manufacture of patent fuel.
 Ownership of Minerals. Royalties. Mineral leases. Mining Juris-
 prudence and Legislation.
 Mine accidents, their statistics and classification. Gas and dust
 explosions. Recovery of Collieries after accidents. Rescue Appliances.
 Surveying; general principles; use of chains and tapes; the cross-
 staff and optical square; the magnetic needle and miners' dial; dialling
 with loose and fast needle; levelling; the Theodolite; methods of
 surveying and setting out used in Collieries and on Mineral properties.

SUBJECT 17.—METALLURGY.*

Section I.—The general properties of Metals. Fuels. Refractory
 Materials. Fluxes and Slags.

Section II.—Iron, Steel and Ferrous alloys.

Section III.—Non-ferrous metals.

Lower Examination.

SECTION I.

The physical properties of metals and alloys; methods of testing;
 influence of foreign elements. Chemical properties of metals.
 Mechanical properties of metals. Elementary principles of the micro-
 structure of metals.

Classifications of fuels. Properties and applications of solid, liquid
 and gaseous fuels employed in metallurgical operations. Calorific
 power and intensity of fuel. Calorimetry and Pyrometry.

Theory of charcoal burning.

Coke burning in Beehive, Retort and Bye-product ovens.

Producer Gas, Water Gas, and various types of producers.

Refractory materials, Acid, Basic and Neutral; their compositions,
 properties and uses. Manufacture of fire bricks, crucibles and other
 appliances.

General principles of furnace construction and types of furnaces.

Selection and calculation of fluxes for ordinary smelting operations.

Constitution and fusibility of silicates.

Definitions of common metallurgical terms.

SECTION II.

Physical properties of iron.

Influence of Carbon, Silicon, Manganese, Sulphur and Phosphorus
 on Iron.

* Examinations in Practical Metallurgy, as a separate subject, are held for Scholarship
 candidates in the Competitive Examinations for Royal Scholarships, &c., and for Sir Joseph
 Whitworth's Scholarships and Exhibitions.

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Modes of existence of Carbon in Iron. Influence of Graphite (free carbon) and combined Carbon (carbide carbon) on the properties of iron.

Commercial ores of iron, their chemical and physical characteristics. General principles and reactions governing the extraction of iron from its ores.

Pig Iron. Numbering or grading. Properties and composition.

Preparation of iron ores for smelting. Breaking and calcining.

General construction of modern blast furnaces. Influence of hot blast. Hot blast stoves. Composition and utilization of blast furnace gases. Composition and character of blast furnace slags.

Wrought or malleable iron. Puddling, Walloon and Lancashire-hearth methods. Shingling, re-heating and rolling. Production of puddled and merchant bars.

Steel. The physical properties and elementary micro-structure of steel. Cementation process. Furnaces and materials used. Blister steel. Shear steel.

Crucible steel. Production from "converted" or "cemented" bars and from "unconverted" bars. Coke and gas fired furnaces. Crucibles used.

The hardening, tempering and annealing of steel.

The Acid Bessemer process. The Basic Bessemer process. Principles of the respective processes. Convertors and appliances used. Products obtained. Utilization of basic slag.

The Open-hearth or Siemens process. Acid and Basic. Principles of the respective methods. Furnaces, linings and appliances used. Products obtained.

Composition of Spiegeleisen, ferro-manganese and ferro-silicon, and their uses in steel manufacture.

Ladles, ingot moulds and casting pits. Forging and rolling of steel.

SECTION III.

Lead. Physical and chemical properties of lead and its principal alloys.

Commercial ores of lead, their chemical and physical characteristics.

General principles and reactions governing the smelting and purification of lead.

Comparison of the chief methods of smelting. Calcination of lead ores.

Smelting in the ore hearth.

Smelting in the reverberatory furnace.

Smelting in shaft furnaces. The water jacket.

Products obtained, slags and fume.

Concentration of silver in work-lead by the Pattinson, Rozan and Parkes processes.

Hard lead and methods of softening.

Mercury. Physical and chemical properties of mercury and the principal amalgams.

Commercial ores of mercury, their chemical and physical characteristics.

General principles and reactions governing the extraction and condensation of mercury.

Comparison of the chief methods of extraction. Shaft and shelf furnaces and condensers. Products obtained.

Silver. Physical and chemical properties of silver and its principal alloys.

Commercial ores of silver, their chemical and physical characteristics.

General principles and reactions governing the extraction of silver by wet and dry methods.

Smelting of argentiferous lead ores.

Principles of cupellation; English and German processes.

Wet methods. Outlines of the Ziervogel and Augustin processes.

Roasting and chloridising. Roasting in reverberatory, rotating and shelf furnaces.

Amalgamation processes. Patio and pan amalgamation. Treatment of the amalgam.

Extraction of silver from argentiferous copper ores.

The Claudet process for the treatment of argentiferous pyrites.

Gold. Physical and chemical properties of gold and its principal alloys.

Commercial ores of gold, their chemical and physical characteristics.

General principles and reactions governing the extraction of gold by amalgamation and wet methods.

General construction of stamp mill; inside and outside amalgamation.

Huntington and Chilian mills. Amalgamation in pans.

Treatment of amalgam and gold sponge.

Chlorination processes. Roasting in reverberatory furnaces. Chlorination in vats and barrels. Precipitation and collection of the gold.

Cyanide Process as applied to ores, tailings and slimes. Precipitation and treatment of the gold.

Refining and parting of gold bullion by sulphuric and nitric acids and by chlorine.

Platinum. Physical and chemical properties of platinum and its principal alloys.

Ores of platinum.

Melting and refining of platinum.

Copper. Physical and chemical properties of copper and its principal commercial alloys.

Commercial ores of copper, their chemical and physical characteristics.

General principles and reactions governing the smelting of copper.

Calcination of copper ores in heaps, stalls, shaft furnaces, reverberatory, mechanically worked, and rotating furnaces.

Copper smelting by the Welsh process and its modifications.

The German process of copper smelting.

Smelting in water jackets.

The Anglo-German process.

Bessemerising of copper matte.

Refining of coarse copper in hearths and furnaces.

Wet methods of copper extraction. Extraction and precipitation of the copper. Treatment of cement copper.

Zinc. Physical and chemical properties of zinc and its principal alloys.

Commercial ores of zinc, their chemical and physical characteristics.

General principles and reactions governing the extraction and condensation of zinc.

Calcination of zinc ores. The Belgian, Silesian, and Belgo-Silesian furnaces for zinc extraction. Ordinary forms of condensers.

Manufacture of sheet zinc.

Tin. Physical and chemical properties of tin and its principal alloys.

Commercial ores of tin, their chemical and physical characteristics.

General principles and reactions governing the smelting and refining of tin.

Preparation of ores for smelting.

Smelting in shaft furnaces.

Cornish method of smelting tin.

Products of smelting operations.

Liquation and refining.

Nickel. Physical and chemical properties of nickel and its non-ferrous commercial alloys.

Commercial ores of nickel, their chemical and physical characteristics.

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General principles and reactions governing the extraction of nickel from its ores.

Extraction from sulphide and arsenical ores. Roasting, smelting and concentration of matte and speiss.

Production of copper-nickel alloy and metallic nickel.

Aluminium. Physical and chemical properties of aluminium and its commercial alloys.

Commercial sources of aluminium.

General principles and reactions governing the extraction of aluminium.

Higher Examination.

For the Higher Examination a more advanced and precise knowledge of the subjects included in the Syllabus of the Lower Examination will be required, together with the following additional subjects; candidates will be expected to illustrate their answers, whenever possible, by neat and accurate sketches.

Candidates must answer questions in Section I., and may select either Section II. or Section III., but may not answer questions from both the latter sections.

SECTION I.

Appliances and methods for testing under tensile, compressive, transverse, torsional and alternating stress; hardness tests. Micrography of metals and alloys. Constitution of alloys; solid solutions; eutectics; cooling and freezing point curves; equilibrium diagrams; the phase rule; allotropism.

The effect of temperature upon metals and alloys; heat treatment: hardening and annealing. Soldering and welding.

The corrosion of metals and alloys.

Principles of Thermo-chemistry. Details of construction of pyrometers and calorimeters.

Modern bye-product coke-ovens; the collection and utilisation of bye-products.

Electric furnaces of various types. Electrolysis and its applications to the extraction and purification of metals.

Calculation of furnace charges. Constitution and micro-structure of slags.

SECTION II.

Physical properties of Iron. Idiomorphic and allotrimorphic crystals: cleavage; absorption and recalescence curves of pure iron.

Modern researches on the hardening and tempering of Steel.

Correlation of tempering colours with temperatures.

Micrographic investigations; influence of Carbon on Iron, including absorption (heating) and recalescence (cooling) curves, mechanical tests, micro-structure.

Micro constituents and transition areas observed in iron and steel. Mechanical properties and micro-structures of alloys of almost pure iron and silicon, iron and manganese, iron and chromium, and mechanical properties of the alloys of almost pure iron and nickel. Influence of copper and arsenic on iron and steel. Typical chemical compositions, mechanical properties and micro-structures of Swedish or other equally pure wrought iron, Swedish and British cast irons, and of English and Black heart malleable cast irons.

Micrographic influence of Phosphorus on structure of cast iron. Expansion curves of typical cast irons. Micro-structure of Blister Bar or cemented wrought iron.

Details of production of blister steel, shear steel and double shear steel.

Crucible steel. Reactions taking place in the manufacture of crucible steel by Huntsman's process. Compositions or tempers of steels suitable for making typical tools, from about 0.6 to 2.6 per cent. of carbon.

Evolution from plain carbon tool steels (a) of self-hardening steel, (b) of high-speed steel.

Relative parts played by Bessemer and Mushet in the development of the Bessemer process. Effects of heat treatment on English Bessemer steels. A comparison of the English, Swedish, and American Bessemer processes.

Development of the Open Hearth process in Britain. Steel Castings. Chemical composition, mechanical properties and micro-structure as cast and after annealing.

Mechanical Testing. Stress-strain diagrams obtained in static tensile testing. Analysis of diagrams. Present position of dynamic or kinetic testing. Cycles of stress in the Wohler and in the Arnold methods.

Composition of metallic manganese, chromium, tungsten, molybdenum, nickel and aluminium used in steel manufacture. Compositions of ferro-chromium, ferro-tungsten and of ferro-vanadium.

Pipes and blow-holes in steel. Composition of the contained gases. Killing of steel. Influence of Manganese, Silicon and Aluminium. Liquation and segregation in steel.

Diffusion of elements in iron. Diffusion and segregation of carbide of iron at various temperatures.

Carbides of steel and iron alloys.

Statistics of the production of iron and steel in the most important countries.

Analysis of iron ores, iron, steel, and the more important metallurgical products.

SECTION III.

A knowledge of sampling and assaying of ores, metals, and metallurgical products will be expected, also statistics of production of the more important metals.

Lead. Treatment of antimonial lead ores and of zinciferous complex ores. Treatment of cupriferous lead mattes.

Blast-roasting (Huntington-Heberlein, Savelsberg, Bradford-Carmichael, Dwight-Lloyd, and other processes).

Collection and treatment of lead fume.

Manufacture of white lead and sublimed white lead.

Electrolytic lead refining. Manufacture of sheet lead and lead pipe.

Silver. Wet methods of extraction, Patera, Kiss, Russell, and similar processes. Cyanide processes.

Mechanical roasting furnaces.

Special amalgamation processes, *e.g.*, Cazo, Fondon, Kröhnke, Tina processes. Boss continuous process. Roast-amalgamation processes in barrels and pans.

Treatment of silver bullion.

Treatment of silver slimes from electrolytic refining.

Gold. Various crushing and grinding appliances; tube mills.

Bromination processes.

Modifications of cyanide process.

Treatment of auriferous anode mud.

Treatment of gold "sweep"; refining of brittle gold.

Copper. Pyritic smelting. Electrolytic processes for ore and matte. Electrolytic refining.

Treatment of Lake Superior ores.

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Best-selecting process; treatment of copper bottoms.

Rolling of copper and its more important commercial alloys.

Zinc. Various forms of condensers. Treatment of zinc fume and "blue powder."

Electrolytic extraction of zinc; electrothermic extraction.

Manufacture of zinc white and analogous products.

Galvanising.

Cadmium. Physical and chemical properties of cadmium and of its principal alloys. Sources of cadmium. Extraction of cadmium.

Tin. Modifications of the Cornish method of smelting.

Treatment of tin-plate scrap; manufacture of tin-plate.

Nickel. Mond process; converter process; electrolytic processes.

Refining of coarse nickel.

Aluminium. Preparation of aluminium compounds from bauxite.

Extraction of aluminium by means of sodium and magnesium.

Electrothermic processes. Preparation of aluminium alloys.

Cobalt. Commercial ores of cobalt, their chemical and physical characteristics. Metallurgical products containing cobalt.

The manufacture of Smalts and Cobalt oxide.

Antimony. Physical and chemical properties of antimony and of its principal alloys.

Commercial ores of antimony, their physical and chemical characteristics.

Liquation processes; production of crude antimony; production of regulus (metallic antimony); refining of antimony.

Arsenic. Physical and chemical properties of arsenic.

Commercial ores of arsenic, their physical and chemical characteristics.

The manufacture and refining of white arsenic; manufacture of other commercial compounds of arsenic.

Bismuth. Physical and chemical properties of bismuth.

Commercial ores of bismuth, their physical and chemical characteristics.

Extraction of bismuth from ores and metallurgical products by dry and wet methods. Refining of bismuth.

**SYLLABUSES UPON WHICH COMPETITIVE
EXAMINATIONS FOR AWARDS IN SCIENCE, BUT
NOT GENERAL EXAMINATIONS, WILL
BE HELD IN 1915.**

SOUND AND LIGHT.

Lower Examination.

SOUND.

WAVE-MOTION AND VIBRATION.—Relations between amplitude, period, frequency, phase, wave-length, energy, and velocity. Wave-front and ray. Longitudinal and transverse vibrations and waves. Simple harmonic vibrations and sine waves. Composition and resolution of vibrations. Lissajou's figures.

VELOCITY OF SOUND.—Measurement and calculation of the velocity of sound. Newton's formula and Laplace's correction. Effect of change of temperature on the velocity in a gas. Reflection and refraction of sound waves. Doppler's principle.

VIBRATIONS of strings, rods, and columns of air, Tuning-forks. Harmonics. Vibrations of plates. Chladni's figures. Maintenance of vibrations by heat.

MUSICAL SCALE.—Temperament. Concord and discord.

INTERFERENCE OF SOUND-WAVES.—Stationary waves. Beats. Measurement of wave-length and frequency. Resonance. Combination tones. Analysis of compound tones.

LIGHT.

RECTILINEAR PROPAGATION OF LIGHT.—Rays and shadows. Pin-hole camera. Measurement of velocity. Photometry.

LAWS OF REFLECTION AND REFRACTION.—Index of refraction. Total internal reflection. Explanation on wave-theory. Formation of images by plane and spherical surfaces, prisms, mirrors, and lenses. Parabolic mirror. Spherical aberration. Caustics.

OPTICAL INSTRUMENTS.—Camera, optical lantern, telescope, microscope, spectrometer, goniometer, sextant.

DISPERSION.—Dispersive power. Achromatism. Spectrum analysis. Absorption spectra. Colour vision.

INTERFERENCE AND DIFFRACTION.—Colours of thin plates. Newton's rings. Fresnel's bands. Diffraction grating and spectrum. Measurement of wave-length.

POLARIZATION.—Double refraction. Tourmaline and Iceland spar. Polarization by reflection. Nicol's prism. Rotation of plane of polarization. Simple forms of polariscope and saccharimeter.

Candidates will be expected to have an elementary knowledge of subsidiary subjects, such as Mathematics, Mechanics, Heat, Electricity, and Magnetism, so far as they relate to the subjects included in this syllabus. They must also have some practical acquaintance with simple forms of apparatus and methods of measurement, and with the graphic representation of the results of observation.

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SOUND AND LIGHT.**Higher Examination.**

The examination will consist of a written paper in which questions may be set on any branch of the subject and its relations to other branches of physics. A knowledge of higher mathematics such as differential equations, Fourier analysis, &c., will not be exacted as essential, but it is most desirable that the student should be acquainted with the elementary applications of the calculus to physical problems. Candidates will be expected to show some experience of the details of practical work and manipulation, which cannot be obtained satisfactorily without laboratory training.

PRACTICAL INORGANIC CHEMISTRY.

Compulsory questions may be set at the Examinations.

Lower Examination.

The examination will consist of two parts :—

- I. A short written examination with the object of testing the candidate's knowledge both of the theory of ordinary methods of qualitative analysis and of the preparation of such substances as are enumerated in the Syllabus for the Lower Examination in Theoretical Inorganic Chemistry (Subject 14).

II. A practical examination in Experimental Chemistry.

A.—One or two substances may be given for qualitative analysis, each containing not more than four radicals, positive or negative, selected from the following list: Silver, lead, mercury, copper, bismuth, cadmium, tin, arsenic, antimony, iron, manganese, aluminium, chromium, zinc, cobalt, nickel, calcium, strontium, barium, magnesium, potassium, sodium, ammonium, chlorides, bromides, iodides, fluorides, sulphides, sulphites, sulphates, chromates, carbonates, phosphates, arsenates, borates, silicates, nitrates, nitrites, chlorates, permanganates.

There might, therefore, be four metals in the form of oxide, or three metals in the form of the same salt, or two simple salts or one metal in the form of three salts.

B.—One substance may be given to be tested quantitatively by means of a volumetric solution provided.

C.—Candidates may also be required to carry out experiments with the object of testing their knowledge of the laws and methods of chemistry not included among the ordinary methods of analysis. For these, instructions will be given in the paper.

Four hours will be allowed for the examination in practical work and one hour for the written examination.

NOTE.—The use of note-books, text-books, or works of reference is permitted during the practical part of the examination in the Laboratory.

Higher Examination.

The examination will occupy one day of eight hours.

SUBJECTS.—1. Qualitative analysis, in which substances will be given which must be examined for the radicals contained in the list given above for the Lower Examination.

2. Gravimetric and volumetric analysis by any well-recognised methods.

3. Gas analysis, and analysis of minerals and commercial metals.

4. Preparation of pure substances or carrying out other well-recognised operations.

The use of note-books, text-books, or works of reference is permitted.

PRACTICAL ORGANIC CHEMISTRY.**CHEMISTRY OF CARBON COMPOUNDS.**

Compulsory Questions may be set at the Examinations.

Lower Examination.

The examination will consist of two parts:—

I. A short written examination with the object of testing the candidate's knowledge both of the principles of the analytical processes and of the methods of preparing and demonstrating the properties of such substances as are enumerated in the Syllabus for the Lower Examination in Theoretical Organic Chemistry (Subject 15).

II. For the practical examination, the student will be required to be familiar with the methods of detecting carbon, hydrogen, nitrogen, sulphur, chlorine, bromine, and iodine in carbon compounds, and to make himself practically acquainted with the determination of melting and boiling points. He must also be acquainted with the reactions of, and tests for, the following substances, and will be required to recognise by physical characters and chemical tests two or more of the following compounds in a pure state or in solution, or, in the case of acids or bases, in the form of salts:—

Methyl alcohol, ethyl alcohol, chloroform, iodoform, ethyl iodide, ethyl bromide, ethyl acetate, formaldehyde, acetaldehyde, acetone, formic acid, acetic acid, oxalic acid, glycerol, tartaric acid, citric acid, urea, hydrocyanic acid, cane sugar, glucose, lactose, starch, benzene, toluene, naphthalene, anthracene, phenol, resorcinol, aniline, benzaldehyde, benzoic acid, salicylic acid, phthalic acid. He may also be required to refer, without identification, unknown compounds to one or other of the following classes:—Alcohols, aldehydes, acids, ketones, amides, amines, esters, phenols.

III. Quantitative work, such as estimation of molecular weights of acids and bases.

He may also be required to prepare specimens of familiar compounds from materials supplied.

The use of note-books, text-books, or books of reference is permitted during the practical part of the examination in the Laboratory.

Three and a quarter hours will be allowed for the examination in practical analysis, and one hour for the written examination.

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Higher Examination.

The examination will occupy one day of eight hours, and will include the recognition of single substances in the solid or liquid state or in solution; the separation and identification of the constituents of mixtures of two or more substances possessing well-marked characteristics; the preparation of specimens; and quantitative work, such as the estimation of halogens, of nitrogen or of acetyl or methoxyl groups, and of molecular weights.

The use of note-books, text-books, or works of reference is permitted.

PRACTICAL METALLURGY.

Lower Examination.

Five hours will be allowed for the examination. The use of note-books, text-books, or works of reference is permitted.

Candidates will be required to work a small number of exercises, the subjects of which will be selected from the matter indicated below.

FUEL.—Coal. Determination of coke and ash. Determination of the calorific power of coal with the aid of Thompson's calorimeter.

REFRACTORY MATERIALS.—Testing of fire-clay and other refractory materials, fire-bricks, and crucibles, with a view to ascertaining, first, their capability of sustaining a high temperature; and second, their power of resisting the corrosive action of fused metallic oxides. The preparation of small clay crucibles from a material consisting of two parts by measure of unburnt to one part of burnt Stourbridge clay. The preparation of cupels of bone ash.

REAGENTS AND FLUXES.—The action and uses of the common reagents and fluxes employed in assaying. Experiments demonstrating their general properties.

ALLOYS.—The preparation of common alloys, such as pewter, brass, and bronze, of which the chemical, physical or mechanical properties differ widely from those of their constituent metals. The copper-zinc alloys; various kinds of brass; the copper-tin alloys, speculum metal and gun-metal; the tin-lead alloys (with or without other metals, fusible metal. The preparation of "Regulus of Venus" (copper and antimony in equal parts by weight).

METALS.—Effects of foreign substances on the mechanical properties of metals.

METHODS ADOPTED IN THE EXTRACTION OF METALS FROM THEIR ORES. •

ROASTING.—Principles of roasting: conversion of metallic sulphides into oxides and sulphates by roasting in the muffle furnace, especially copper, lead and zinc sulphides. Estimation of the amount of compounds soluble in water produced by roasting certain mixtures of metallic sulphides such as argentiferous copper matters.

REDUCTION.—PRINCIPLES OF REDUCTION.—The reduction of iron oxide by the heating of hematite in small clay crucibles, or in crucibles lined with charcoal, suitable fluxes and reducing agents being added.

Reduction of copper oxides and of lead oxides by carbon.

Reduction of lead sulphide by the mutual action of the sulphide and oxide,

Reduction of copper from copper sulphide by the action of the sulphide on copper oxide. In these cases the mixture is so adjusted that the relation between the sulphur and oxygen shall be the same as in sulphur dioxide.

Reduction of lead sulphide by metallic iron.

Reduction of copper silicates by fusion with iron oxides or lime, and charcoal.

The fusion of copper silicates with iron sulphides.

Reduction of lead silicates.

The production of coarse metal, white metal, and metallic copper from copper pyrites.

CEMENTATION (OXIDIZING AND CARBURIZING).—The leading effects that attend (1) the prolonged heating of thin pieces of cast-iron in hematites, and (2) the prolonged heating of wrought-iron in charcoal.

SCORIFICATION AND CUPELLATION.—The general features of the enrichment of argentiferous lead by scorification in a muffle with subsequent separation of the silver by cupellation on a bone-ash cupel. The behaviour of tin, antimony and zinc, and of copper-zinc and copper-nickel alloys when cupelled and when scorified with lead.

PURIFICATION OF METALS.—DRY METHODS.—Refining copper by oxidizing and "poling" commercial copper melted in a crucible. The candidate should be familiar with the characteristics of the ingot of metal in the three states known as:—(1) "dry copper"; (2) "tough copper"; (3) "overpoled."

SLAGS.—Experiments on their formation.

AMALGAMATION.—Action of metallic mercury when triturated with metallic silver, artificially prepared silver sulphide, and silver chloride; separation of the amalgam formed in each case; its concentration by squeezing in leather, and subsequent distillation.

LIQUATION.—Separation of native antimony sulphide from its gangue.

ASSAYS.—*The dry assays of zinc, lead and silver, and the quantitative determination of iron, copper and zinc in simple ores and alloys.*

Higher Examination.

The examination will occupy eight hours.

The use of note-books, text-books, or works of reference is permitted.

Candidates will be required to work a small number of exercises, the subjects of which may be selected from the syllabus for the Lower Examination or from the additional matters specified below.

CHLORINATION, &c.—Formation of gold chloride by the action of chlorine gas on finely divided gold. Solution of the chloride in water, and the precipitation of the gold by ferrous sulphate.

Treatment of auriferous iron pyrites by roasting with salt; conversion of the compound so formed into finely divided gold by an elevation of temperature, and subsequent conversion of the gold into chloride soluble in water by the action of chlorine gas. Recovery of the gold from solution by precipitation with ferrous sulphate.

Preparation of silver chloride. Solution of the silver chloride in borine, and separation of the metal from solution by metallic copper.

Treatment of copper pyrites by roasting with common salt, and subsequent extraction of the soluble copper chloride by water.

Treatment of pyrites mixed with silver sulphide by roasting with common salt, and estimation of the amount of silver that has been converted into chloride as shown by the solvent action of sodium hyposulphite and sodium chloride respectively.

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Treatment of argentiferous copper matte by roasting, and estimation of the amount of silver which has been converted into sulphate as shown by the solvent action of hot water.

PURIFICATION OF METALS.—Separation of copper alloyed with silver and gold by “parting” with sulphuric acid, recovery of the silver from solution by metallic copper, and of the copper from the copper sulphate so formed, by metallic iron.

Separation of gold from silver by “parting” with nitric acid; recovery of the silver by precipitation as chloride, and its subsequent reduction to the metallic state by zinc or iron.

Refining crude copper.

The production of copper “bottoms” from auriferous copper regulus.

The precipitation of gold from solutions.

The estimation of the chief metals in common ores, metallurgical materials and products, by dry and wet methods.

The determination of the suitability of coal and coke for use in specified metallurgical operations.

The estimation of silica, lime and iron in slags, and of silica in acid refractory materials.

The estimation of lime and magnesia in basic refractory materials.

The estimation of iron, gold, silver, copper, zinc, lead and tin in the common alloys in which these metals occur.

The preparation of chemically pure gold and silver.

IRON AND STEEL.

The estimation of carbon, silicon, sulphur, phosphorus, and manganese in cast iron and in steel.

Hardening, tempering and annealing steel.

LABORATORY ARRANGEMENTS FOR PRACTICAL METALLURGY

In most cases comparatively small additions to the Chemical Laboratories, arranged and furnished in accordance with the prescribed regulations, will enable the Board to allow an examination in Practical Metallurgy to be held.

It is necessary that one or more wind furnaces should be provided and these furnaces should be in connection with a flue at least 30 feet high. The furnaces may be placed in a basement below the laboratory but there is no objection, if space permits, to one being in the laboratory.

There must also be a muffle furnace capable of heating to a bright redness a muffle at least 8 inches long, 4 inches wide, and 3 inches high when there is an abundant supply of gas, gas muffle furnaces may be adopted with advantage.

Not more than three candidates will be allowed to use the same muffle furnace at any examination in Practical Metallurgy.

The muffle furnace may be in the laboratory, as it is also useful in conducting various chemical operations.

Each candidate should be provided with the tools and appliances set forth in List I., and those named in List II. must be kept in the laboratory. List III. gives the reagents, fluxes, &c., that will be required for general use.

LIST I.

Each candidate must be provided with the following articles:—

- 1 small hammer.
- 1 small anvil.
- 1 drill.
- 1 steel spatula.
- 1 camel hair brush.
- 1 hard tooth brush.
- 2 sheets of glazed paper.
- 1 pair of scissors.
- 1 pair of pliers—half round, taper.
- 1 pair brass forceps.
- 1 triangular file.
- 1 wire triangle—covered.
- 2 glass rods.
- 1 glass funnel, 3 inches in diameter.
- 4 beakers, Nos. 5, 6, 7 and 8.
- 1 washing bottle fitted.
- 2 conical flasks and small funnels.
- 2 Bohemian flasks, 24 ozs.
- 1 Berlin evaporating dish, No. 7.
- 1 Berlin evaporating dish, No. 2, $3\frac{1}{2}$ inches diameter.
- 1 porcelain mortar.
- 1 porcelain crucible, $1\frac{1}{2}$ inch diameter.
- 1 packet of filters, $5\frac{1}{2}$ inches diameter, or filtering paper.
- 6 test tubes.
- 2 feet combustion tubing.
- 1 lens.
- 6 scorifiers, $2\frac{1}{2}$ inches diameter.
- 12 cupels.
- 6 earthen crucibles, each size, $1\frac{1}{2}$, $2\frac{1}{2}$, and 3 inches diameter.
- 1 black-lead crucible, 3 inches diameter.
- 2 roasting dishes, 3 inches diameter.
- 1 duster or cloth.
- 1 note-book.
- $\frac{1}{2}$ oz. silver, or old or foreign silver coin.
- 2 dwts. gold, or old or foreign gold coin.

LIST II.

The following must be kept for general use:—

- 3 pairs of furnace tongs.
- 1 open ingot mould.
- 1 ingot mould with hemispherical cavities.
- 1 copper scoop.
- 1 cupel mould.
- 1 mould for making small clay crucibles.
- 2 iron cupel trays.
- 1 iron mortar.
- 1 anvil, 4 inches by 4 inches
- 1 hammer.
- 1 pair of metal shears.
- 1 pair of flattening rolls.
- 1 bucking plate and iron.

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LIST III.

The following metals and reagents, which need not be of a high degree of purity, must be kept, in addition to the ordinary stock of a chemical laboratory:—

Antimony.	Lead (in thin sheet free from silver).
Arsenic.	Mercury.
Bismuth.	Tin.
Copper.	Zinc.
Iron (hoop and wire).	Tin oxide.
Nickel.	Zinc oxide.
Charcoal.	China clay.
Sulphur.	Glass, powdered.
Antimony sulphide (black).	Lime.
Bismuth oxide.	Salt.
Copper oxide (black).	Fireclay.
Copper sulphate.	Siliceous sand.
Cobalt oxide.	Fluorspar.
Iron oxide.	Red argol.
Litharge.	Borax.
Red lead.	Dry sodium carbonate.
Lead sulphate.	Potassium cyanide.
Manganese oxide (black).	Potassium nitrate.
Mercury sulphide (red).	

GENERAL BIOLOGY.

N.B.—The tests may include the description, drawing, and interpretation of simple natural objects not named in the syllabus.

Compulsory questions may be set at the Examination.

1. Unicellular organisms. The form, size, and structure, the mode of growth and multiplication, and the conditions and results of the living activity of *Saccharomyces*, *Chlamydomonas*, *Euglena*, *Amœba*.

2. The Earthworm (*Lumbricus*). The general structure of the earthworm; the division of the body into segments or somites. The mode of life of the earthworm; the action of earthworms in the formation of vegetable mould.

3. The Crayfish (*Astacus*). The general structure of the crayfish and its mode of life. The exoskeleton and its several parts; the mode of growth; the appendages; their common plan, and their adaptation to special purposes (any intelligible method of denoting the appendages and their parts will be accepted). The structure, arrangement, and mode of action of the several organs; and especially the digestive, circulatory, respiratory, and nervous systems.

4. The general structure and the life histories of some common Insects. The Cabbage White Butterfly, the Tiger Moth, the Silkworm Moth, and *Chironomus* should be studied and drawings and notes made of the transformations. The common house-fly and the cockroach should also be examined.

5. The Dog-fish (*Scyllium*). The general structure and mode of life of a dog-fish. The external characters; the scales and teeth; the fins. The chief features, but not the details, of the skeleton of the dog-fish.

The structure, arrangement, and mode of action of the several organs; and especially the digestive, circulatory, respiratory, and nervous systems. The main points of resemblance and of difference between a dog-fish and a frog.

6. The general anatomy of a Frog. The skeleton of the frog; its component parts, and their uses and relations to other organs. The structure and arrangement of the digestive, circulatory, respiratory, excretory, and nervous systems of the frog, and the uses and modes of action of the several parts (including the sense organs). The characters of the blood-circulation as seen in the web of a frog's foot. Arteries, veins, capillaries. The blood corpuscles, red and white. The uses of the blood, and the modes and places in which these are effected.

7. The outlines of the development of the Frog. The formation of the eggs. Fertilisation and segmentation of the eggs. The development of the tadpole, and especially of its nervous system and alimentary canal. The respiratory organs and the method of breathing of the tadpole. The changes that occur during the metamorphosis of the tadpole into the frog.

8. THE GENERAL STRUCTURE OF A BIRD.—The feathers, wing, beak, and other external features should be carefully examined. The skeleton should be studied, especially in relation to support and locomotion. Very few technical terms are required; the chief thing is to form a clear mental picture of the structures and of their special adaptations.

9. SOME COMMON QUADRUPEDS.—The external features and mode of life of the cat, dog, rabbit, mouse, horse, sheep, and bat should be observed, *e.g.*, hair or fur, eyes and ears, teeth, hoofs or claws, food, modes of locomotion, likes and dislikes, habitations, &c. A skeleton of one of these animals should be accessible, and its chief peculiarities should be pointed out.

10. ELEMENTARY PHYSIOLOGY.—Very elementary lessons should be given on digestion, circulation, and respiration. A sheep's heart should be dissected, and other simple dissections and experiments can be shown.

11. The structure and life-history of a Bean or other Flowering Plant. The structure, including the minute structure, of the stem, the root, and the foliage leaf in connection with their functions. The structure of the flower; the calyx, the corolla, the andræcium, the gynoecium; the floral leaves, sepals, petals, stamens, and carpels; the nectaries. The structure of the anther; the pollen sacs and the pollen grains. The structure of the ovary; the ovule, and the embryo-sac with its contents. The processes of pollination and fertilisation; the products of fertilisation; the fruit; the seed.

12. The general character of the vegetation found in such localities as a roadside, hedgerow, bank of a river, pond, or canal.

13. The identification of common trees, oak, ash, beech, sycamore, horse-chestnut, elm, poplar, alder, willow, birch, hazel, and hornbeam, by means of twigs, buds, bark, leaves, &c.

14. The pollination and fertilisation of flowering plants. The formation of the fruit and seed.

15. The germination of seeds, including the conditions necessary to germination, and the chemical changes involved. The food-reserves of seeds and the changes which they undergo during germination.

16. The vegetative reproduction of flowering plants.

17. The structure and life-history of a Fern (*Pteris*). The general structure of the sporophyte in connection with its mode of life. Sporangia and spores. The structure and development of the prothallium. The sexual reproductive organs and the early stages of development of the sporophyte.

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18. The structure and mode of life of *Cystopus* (*Albugo*) *candida*. Its methods of reproduction and dispersal.

19. The physiology of the flowering plant. The physiology of nutrition in connection with the presence of chlorophyll; the absorptive, assimilative, and transpiratory organs; conduction of liquid from the roots to the leaves; transpiration; the distribution of the organic substances formed in the leaves.

Experimental proof of the following:—

- (a) Starch-formation in green plants supplied with carbon dioxide and sunlight. Starch prints in leaves.
 - (b) The uses of dissolved salts in the nutrition of green plants (Water cultures.)
 - (c) The path by which water ascends to the leaves (removal of obstruction of systems of tissue in a living woody stem).
20. The responses of plants to external stimuli, light, contact, and gravity.
21. Comparison of the nutritive processes of green plants, fungi, and animals. The way in which plants aid the nutrition of animals, and animals the nutrition of plants.
22. The chief distinctive characters of plants and animals.

HUMAN PHYSIOLOGY.

Lower Examination.

Candidates are expected to have studied practically the under-mentioned points in the elements of Anatomy and Physiology. They will be asked to describe in the written examination the chief facts brought out by experiments and observations, which have been either demonstrated by the teacher or carried out by themselves.

Compulsory questions may be set at the Examinations.

a. THE GENERAL BUILD OF THE BODY.

The form and relative positions of the following parts of the skeleton:—Skull, vertebrae, ribs, sternum; scapula, clavicle, humerus, radius, ulna, carpus, metacarpus, phalanges (of the hand); pelvis, femur, tibia, fibula, tarsus, metatarsus, phalanges (of the foot).

The position in the body, and the general form of the following internal organs:—The brain and spinal cord; the pharynx, gullet, stomach, and intestines; the salivary glands, the liver, and the pancreas; the posterior nares, the larynx, trachea, and lungs; the diaphragm; the kidneys and the bladder; the heart and the great vessels.

b. THE BLOOD AND LYMPH.

The size, form, relative number, structure and functions of the corpuscles of the blood and lymph.

The general composition of the blood. The nature of the process of blood clotting.

The function of the blood. The colouring matter of the blood and its principal derivatives.

The microscopic characters and chemical composition of lymph.

c. THE HEART, BLOOD VESSELS AND LYMPHATICS.

The structure of the heart in the Frog and in the Mammal. The action of the heart in propelling the blood. The course of the circulation and the reason why the blood moves in only one direction. The general

character of the blood-flow in arteries, capillaries, and veins. The evidence of the circulation obtainable in the living body. The general distribution of the principal arterial and venous trunks. The minute structure of the heart, arteries, veins, and capillaries.

The variations in the intraventricular blood pressure. The action of the valves of the heart. The sounds of the heart; the use of the stethoscope. The cardiograph and its record.

The mechanics of the circulation. Blood pressure, arterial, venous and capillary. The circumstances determining the rate of blood-flow. The phenomena of the pulse. The sphygmograph and its record. The character and causation of the venous blood-flow. The structure and functions of the spleen.

The nervous supply of the heart in the Frog and in the Mammal; the influence of the vagus and sympathetic nerves on the heart.

The influence of the nervous system on the blood vessels; vaso-motor centres and nerves.

The structure of the lymphatic vessels and glands, and the connection of the lymphatic with the blood vascular system. The origin of the lymphatics. The causes which determine the amount of lymph present in the lymphatic spaces, and those which determine the flow of lymph along the lymphatic channels.

d. FOOD, DIGESTION AND ABSORPTION.

The arrangement of the alimentary canal. The structure and functions of the salivary glands. The oesophagus; the structure of its walls. The stomach; its glands and their functions. The structure and functions of the intestinal villi. The structure and functions of the pancreas. The intestinal tubular glands and the function of their secretion. The chief food-stuffs and the chemical elements they contain. Examples of the occurrence of proteid, gelatine, starch, sugar, and fat in articles of food. The form in which nitrogen, hydrogen, and carbon enter and leave the body. The proximate or immediate principles in articles of food. The distinctive chemical characters of albumin, globulin, peptone, tyrosin, starch, glycogen, cane sugar and reducing sugars.

The changes produced in food by mastication and by the action of saliva. The chief changes produced in food by digestion in the stomach and in the small intestine. The action of the pancreatic secretion. The purpose of the digestive changes.

The chief differences between lymph and blood. The nature of chyle. The discrimination between the substances absorbed by the intestinal lymphatics and those absorbed into the intestinal blood.

The structure of the liver, and the course of the blood through it. The arrangements of the ducts of the liver. The composition and functions of the bile.

e. EXCRETION.

(1) The minute structure of the kidney, ureter, and bladder.

The circulation in the kidney, and the changes which the blood undergoes in passing through it.

The nature of the secretory activity of the kidneys, of its relationship to the glomeruli and tubules, and the circumstances which affect it.

The quantity and nature of the waste products of all kinds excreted by the kidneys in 24 hours. The distinctive chemical characters of urica. The physiological significance of the nitrogenous compounds in urine.

(2) The minute structure of the skin; the functions of the skin and its contained structures; the blood capillaries of the dermis and the conditions which alter their blood capacity.

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f. RESPIRATION.

The upper air passages. The structure of the thorax. The pleura. The structure of the respiratory organs, and the distribution of the blood through them. The analysis of the respiratory movements in detail. The causation of the diminished intra-thoracic pressure, and the effect on this of inspiration. The mechanism by which coughing, sneezing, sighing, and hiccoughing are effected. The gases of venous and arterial blood. The physical and chemical processes involved in the conversion of inspired into expired air, and of venous into arterial blood. The respiratory activity of the tissues and the conversion of arterial into venous blood.

The manner in which the nervous system regulates the respiratory movements; the respiratory centre. How the nervous mechanism of respiration is affected; (1) by nervous influence, (2) by chemical changes in the blood. The phenomena of dyspnoea, apnoea, and asphyxia.

The influence of the respiratory movements on the circulation.

g. NUTRITION; METABOLISM; ANIMAL HEAT.

The statistics of nutrition; the income and output of the body, how they balance.

The uses of proteid, gelatinous, fatty, and carbohydrate foodstuffs. The effect on metabolism of the following conditions: (1) excess or deficiency of nitrogenous and non-nitrogenous food, (2) muscular exercise.

The energy of the body, its source and expenditure; the amount and character of the daily expenditure.

The sources of the production and the loss of animal heat; their balance during health; how maintained and regulated by changes: (1) in the amount of loss, (2) in the amount of production.

h. THE MUSCULAR SYSTEM AND ANIMAL MECHANICS.

The structural differences between muscle and tendon, and the functions of those two forms of tissue. The movements of a limb as examples of the results produced by muscular action. The meaning of the terms "origin" and "insertion" as applied to a muscle. The meaning of the terms extensors, flexors, abductors, and adductors as applied to the groups of muscles moving a limb.

The nature of joints, with examples of ball-and-socket, saddle, hinge, and pivot joints. The different kinds of levers, with examples of them in the body.

The minute structure of cartilage, bone, connective tissue, and muscle. Cilia and ciliary action.

The mechanical changes which take place in a muscle during contraction. The characters of a simple and of a tetanic contraction. Rigor mortis. Muscle fatigue.

The mechanism of standing and walking.

The structure of the larynx; the movements of the glottis.

i. THE SENSES.

The different kinds of sensations.

The structure of the papillae and nerve endings in the skin. The sensations referred to the skin.

The minute structure of the tongue and of taste bulbs.

The structure of the olfactory organ. The nature and extent of the air-chambers connected with it.

The minute structure of the various parts of the eye-ball.

The formation of the image on the retina. The blind spot.

The conditions of distinct vision. Accommodation; its mechanism, limits and defects.

The ophthalmoscope; the retinal blood vessels. Evidence that visual impressions begin in the rods and cones. The peculiar characters of visual sensations, their duration, the influence of fatigue, the fusion of successive sensations, the production of colour perception.

Movements of the eye-ball. Binocular vision. Judgments of distance, form, and solidity.

The structural arrangements of the organ of hearing. The outer-ear. The structure and functions of the middle-ear. The position, structure, and function of the Eustachian tube. The minute structure of the inner-ear. The parts forming the bony and membranous labyrinth.

Auditory sensations. Use of two ears.

j. THE NERVOUS SYSTEM.

The cerebro-spinal system.

The distinction between motor and sensory nerves.

The relative positions of the following parts: Medulla oblongata, cerebellum, pons, crura cerebri, corpora quadrigemina, cerebral hemispheres, corpus callosum, olfactory bulbs, and optic tracts.

The peripheral distribution, course, and general functions of the twelve pairs of cranial nerves.

The minute structure of the spinal cord; the more important structural differences observable in different parts of the spinal cord.

The chief characters of reflex actions. The connections of the posterior and the anterior roots, and the function of the nerve fibres they contain.

The minute structure of nerves; medullated and non-medullated nerve-fibres. The forms of nerve cells in the spinal cord, posterior root and sympathetic ganglia.

The sympathetic system, its general structure and its anatomical and physiological relations to the cerebro-spinal system.

Higher Examination.

The subject-matter of the examination is arranged in two sections, A. and B., as set forth below, and candidates will be expected to answer questions in both these sections.

Section A.

- (1) The subjects set forth in the syllabus of the Lower Examination.
- (2) The structure and chief functions of the various parts of the central nervous system.

Section B.

- (1) The examination of microscopic specimens displaying the minute structure of organs or tissues.
- (2) The description of the simpler methods employed in practical physiological chemistry for the recognition of the compounds present in foods and extracts of body tissues, also those used for demonstrating the changes brought about by the various digestive enzymes.
- (3) The description of the methods employed for the examination of blood, hæmoglobin and its derivatives, bile and urine.

In connection with Section B. (1), candidates should be furnished with a microscope, as they will be required to report upon microscopic specimens, and this part of the examination will be compulsory for all candidates; it is therefore necessary that candidates should be familiar with the microscopic appearance of organs and tissues.

It is further very desirable in connection with Section B. (2) and (3), that candidates should have carried out for themselves the simpler chemical operations used in elementary physiological chemistry.

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ZOOLOGY.**Lower Examination.**

Candidates are expected to show an adequate practical knowledge of the anatomical structure, external characters, mode of life, and life history (subsequent to hatching) of the animals named, except where particular parts only are expressly indicated.

Compulsory questions may be set at the Examinations.

1. The external features, general anatomical structure, mode of life (feeding, locomotion, self-protection), and life-history of the following animals:—Frog (including the outlines of development), Crayfish, Cockroach, Earthworm, Pond-mussel, Hydra, Vorticella, Amœba. Practical, but not detailed, knowledge of each animal is expected.

2. The skeletons of a frog, a bird, and a mammal (the adaptations of the skeleton to support, locomotion, and prehension of food should receive particular attention).

3. Mammals. The skeleton of the Rabbit in detail. The distinctive features (visible without dissection, but including those drawn from the skeleton and teeth) of the indigenous orders.

4. Birds. The Pigeon, including the skeleton. The development of the Chick as studied by fresh and permanent preparations of entire embryos.

5. Fishes. The Cod or Haddock, including the skeleton.

6. Insects. The Honey-bee and Harlequin-fly (*Chironomus*) in all their stages (external structure only). The adaptation of these insects to their surroundings, and the adaptation of the Honey-bee to the social state.

7. The characters of the following divisions of the animal kingdom:—Protozoa, Porifera, Cœlentera, Echinodermata, Annelida (*Chaetopoda* included), Arthropoda, Mollusca, Chordata.

8. The characteristic features of the marine, fluviatile and terrestrial faunas. The main facts relating to the geographical distribution of Mammals. Outlines of the geological history of Mammals.

9. Either A. or B.

A. MARINE.

The structure and life-history of the Cuttlefish (*Sepia* or *Loligo*), Whelk, Shore Crab, Stalked Barnacle, Lug-worm, Starfish, Compound Hydroid (*Obelia*). The adaptations of these animals to their mode of life.

B. FLUVIATILE.

The structure and life-history of *Paludina*, *Anodon*, *Daphnia*, Leech, Nais, Hydra, *Paramecium*. *Anodon* and Hydra are to be studied in more detail than in 1. The adaptations of these animals to their mode of life.

Higher Examination.

Candidates should be furnished with a microscope and dissecting instruments, as they will be required to show their practical knowledge of Zoology by examining and reporting upon specimens, microscopic or otherwise, sent for that purpose, or by carrying out ordinary Zoological dissections.

The examination may include questions on—

1. The structure and life-history of any well-known types of the following groups:—Protozoa, Porifera, Cœlentera, Echinodermata, Vermes, Arthropoda, Mollusca and Vertebrata. The practical work will be confined to:—the common fresh-water Protozoa, *Spongilla*, a

Calcareous Sponge, Cordylophora, or other common Zoophyte, Aurelia, Nereis, Bugula, Daphnia, Lepas, Cancer, Gammarus, Scolopendra, Periplaneta, Dytiscus, Apis, Pieris, Chironomus, Mya, Chiton, Helix, Buccinum, Sepia, Uraster, Echinus, Ascidia, Amphioxus, Perca, Raia, Columba, Lepus.

2. The elements of Comparative Osteology and Embryology.
 3. Modes of reproduction of animals. Ovogenesis, Fertilisation.
 4. The development of the Tadpole, Chick, Chironomus, and Limnæa.
- A practical knowledge of these is expected.
5. The classes and orders of the Animal Kingdom.
 6. A general knowledge of the theories of Heredity and Evolution.
 7. The distribution of Vertebrata. The characters and sub-divisions of the zoological regions. The interpretation of the facts of distribution.

BOTANY.

Specimens, not necessarily selected from the prescribed orders, may be set for practical description.

Compulsory questions may be set at the Examinations.

Lower Examination.

General Morphology, Histology, and Physiology.

- I. The differentiation of the plant-body into root, stem, and leaf.
 - i. The morphology of the root and its modifications; the branching of the root.
 - ii. The morphology of the stem and its modifications; the modes of branching of the stem; the structure and position of buds; vernation.
 - iii. The morphology of the leaf; the different kinds of leaves; the branching of the leaf; the different parts of the leaf; leaf-base stipules, petiole, blade; their special modifications; the arrangement of leaves on the stem.
- II. The structure of the organs and members, including—
 - i. The chief characters of the vegetable cell, including an elementary knowledge of its chief constituents and contents.
The protoplasm, nucleus, plastids.
The cell-wall, starch-grains.
 - ii. The structural characters and distribution of the tissues.
The tegumentary tissues, stomata, lenticels.
The cortical and medullary tissues, medullary rays.
The vascular tissues, distinctions between wood and bast.
- III. The functions of the various organs; the relation of their structure to their functions.
 - i. The chemical nature of the food-elements of plants. Their sources, and the modes in which they are respectively absorbed by the organism.
 - ii. The absorption of water. Turgescence. Movement of water in the plant. Transpiration, its significance. Methods of demonstrating and of measuring its rate.

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- iii. Photosynthesis (carbon-assimilation) in green plants. The study of chlorophyll and its spectrum. The chemical nature of the chief organic substances formed within the plant, starch, cellulose, sugars, fats, albuminoids.
- iv. Aeration of the tissues by means of intercellular spaces.
- v. Respiration. Its significance. Methods of demonstrating its occurrence.
- vi. Growth. Determination of the rate of growth in stems and roots. Conditions which affect growth.
- vii. Irritability as manifested by growing and motile organs. Geotropism, heliotropism, movements due to mechanical or chemical stimuli, *e.g.*, the stamens of Barberry, the tentacles on the leaf of Sundew.

SPECIAL MORPHOLOGY AND PHYSIOLOGY OF THE ANGIOSPERMOUS FLOWERING PLANT.

The inflorescence and its mode of branching; bracts; the difference between definite and indefinite inflorescences; the distinctive characters of the following kinds: raceme, spike, spadix, corymb, panicle, umbel, head, cyme, glomerule.

The morphology of the flower and its organs as illustrated by wild or commonly cultivated plants; torus (or receptacle), perianth, andræcium, gynæcium: aestivation: the symmetry of the flower: the modifications of the flower due to cohesion, adhesion, suppression, and multiplication of the various parts.

The calyx: the sepals; their form, arrangement, and function.

The corolla: the petals; their form, arrangement, and function.

The andræcium; the structure and use of the stamen; the filament anther, pollen-sacs, pollen.

The gynæcium; the structure of the carpel; the stigma, style, ovary, placenta.

The structure and form of the ovule; the embryo-sac and its contents.

The processes of pollination and fertilisation.

The morphology of the fruit: the distinctive characters of the different kinds of fruits.

The structure of the seed; presence or absence of albumen (endosperm, perisperm), structure and position of the embryo, nature of the aril. Adaptations for the dispersal of seeds. The various modes of germination.

The different provisions for the persistence of the individual plants: annuals, biennials, perennials.

The distinctive characters of the classes Dicotyledons and Monocotyledons and of their principal divisions and of the following natural orders: credit will be given for knowledge based on acquaintance with the plants as they occur in their natural surroundings:—

Ranunculacæ.

Cruciferae.

Crassulacæ.

Leguminosæ.

Rosacæ.

Campanulacæ.

Compositæ.

Scrophulariacæ.

Labiatae.

Salicinae.

Graminæ.

Liliacæ.

Orchidacæ.

Amarylhidacæ.

The character of the vegetation commonly found growing in such localities as a roadside, hedgerow, wood, meadow, moor, sea coast, &c. (It is not expected that candidates will necessarily have visited all these localities, and a choice will be given in questions relating to them, but no credit will be given for answers which do not show that the candidate

has practical acquaintance with the vegetation of the locality he may select.)

They will also be expected to exhibit a practical acquaintance with :—

- I. The morphology of **GYMNOSPERMS**, as exemplified by *Pinus*.
- II. The morphology of the **VASCULAE CRYPTOGAMS**, as exemplified by *Selaginella* and *Aspidium*.
- III. The morphology of the **MUSCINEÆ**, as exemplified by *Funaria* and *Pellia*.
- IV. The morphology of the **ALGÆ**, as exemplified by *Fucus*, *Spirogyra*, *Hæmatococcus* (*Sphærella*).
- V. The morphology and physiology of the **FUNGI** (including Lichens) as exemplified by :—

Agaricus.

Eurotium.

Puccinia.

Parmelia (*Physcia*) or *Collema*.

Pythium or *Cystopus* (*Albugo*).

Mucor.

Saccharomyces.

Higher Examination.

In addition to a higher standard of knowledge of the subjects prescribed in the foregoing syllabus for the Lower Examination, candidates will be expected to show a general knowledge of—

- (1) the British Flora and the following exotic natural orders of Angiosperms, *viz.*, *Palmeæ*, *Scitamineæ*, *Guttiferae*, *Rutaceæ*, *Myrtaceæ*, *Piperaceæ*.
- (2) the principal forms of the Gymnosperms, Vascular, Cryptogams, Muscineæ, Algæ, and Fungi, and the following fossil types (together with their fructifications), *Lepidodendron*, *Lyginodendron*, *Sphenophyllum*, *Cheirostrobilus*, *Calamites*, *Bennettites*, *Cordaitea*.
- (3) the characteristics and affinities of the great groups of plants.
- (4) the general Biology (Bionomics) of plants, including adaptation to environment, origin of species, natural selection: the characteristic features of the various plant societies (Ecology):
- (5) Vegetable Physiology of a more advanced character than in the Lower Examination.

GEOLOGY.

Lower Examination.

The Crust of the Globe; its Density and Chemical Composition: Comparison with Meteorites; Distribution of Temperature; Isogeotherms.

The common rock-forming minerals. Their Crystallography and other Physical Characters; their Chemical Composition; the characters by which they may be distinguished in thin sections under the microscope.

Rocks, their classification, structure, chemical composition and mineralogical constitution; megascopic and microscopic characters; the changes they undergo.

Stratification, varieties of; False-bedding; Ripple marks, &c.; Conditions of deposition as indicated by features of strata; Oolitic and nodular structures; Septaria, cone-in-cone, flint and chert; Joints and columnar structure; Folds, Faults and Thrusts and their varieties; Fault-rocks and Breccias; Slickensides, Mylonites, &c.; Cleavage and its origin; Contact and Regional Metamorphism.

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Dip and strike of rocks; the effects of sub-aerial, fluvial and marine denudation in moulding the surface of a country; the construction and use of geological maps and sections; calculation of true from apparent dip, &c.

Fossils, mineralisation by different substances; portions of organisms preserved; casts, tracks, burrows, &c.; derived fossils and pseudo-fossils; the chief living and extinct groups of Plants and Animals.

Leading features and characteristic fossils of the series of British Formations and comparison with their European equivalents.

The features presented by Volcanic and Plutonic rock-masses; Distinction of intrusive and interbedded rocks; Volcanoes and their products; Geysers and mineral springs; Nature and origin of Mineral Veins.

Higher Examination.

Physical features of the Earth's surface and their formation by the action of meteoric agencies, rivers, glaciers and the sea; Changes in the distribution of temperature and pressure in the atmosphere, hydrosphere and lithosphere; Deposits now forming in the ocean, in lakes and in rivers and on the land; glacial formations.

Volcanic phenomena and the materials formed by the action of volcanoes, geysers and mineral springs. Earthquakes and the methods and instruments of seismographical investigation. Proofs of permanent movements and dislocations taking place in the earth's crust.

The evolution of the surface features of a country as the joint result of sub-aerial and subterranean action. Changes taking place in the contours and drainage system in different districts as the result of these actions.

Methods employed in surveying geologically districts of which the topographical features have been more or less definitely determined; the construction of geological sections from data of different degrees of accuracy.

The minor divisions of geological formations; Zones and their modes of distinction; relative values of zone-fossils.

The British formations and their characteristic fossils; comparisons of these with their equivalents in different portions of the globe; reasoning based on the study of the faunas and floras of different formations; synthetic and persistent types.

Petrology and the microscopic study of rocks, with the optical principles on which the determination of rock-forming mineral depends; the origin and metamorphoses of rocks.

MINERALOGY.

Specimens of minerals will be sent for an examination in which the blowpipe and the reagents enumerated below may be used. The specimens sent to be examined will be in the state of coarse powder, and are to be tested as to their physical and chemical properties in accordance with the syllabus, so far as the use of the apparatus and reagents mentioned below will permit.

The powders supplied for blowpipe examination in the higher stage will be of more complex character than in the lower; and the candidate will be required to make a systematic blowpipe analysis, stating his results in tabular form.

For determination by inspection, any minerals (with the exception of very rare ones) may be set at this stage, and also the chief varieties of the more common minerals.

Each candidate for examination in Mineralogy should be provided with a portable set of blowpipe apparatus.

The following articles and reagents must be included in this set:—

Oil or Candle Blowpipe-Lamp.
Mouth Blowpipe.
Small Agate or Porcelain Mortar.
Platinum Wire.
" Foil.
Charcoal.
Open and closed Glass-Tubes.
Silver Foil or Silver Coin.
Magnet.
Knife.
Lens.
Tinfoil.

Cobalt Glass.
Copper Wire.
Magnesium Ribbon or Wire.
Borax.
Sodium Carbonate.
Microcosmic Salt.
Cobalt-Nitrate Solution.
Hydrochloric Acid.
Sulphuric Acid.
Litmus Paper, red and blue.
Potassium Iodide and Sulphur.

The questions set to test the practical knowledge of the candidates will be compulsory.

Lower Examination.

Crystals; their symmetry and classification; axial relations; the use of symbols; projection; irregularities and anomalies in crystals; twinning of crystals and its varieties; cleavage; goniometers and their use.

Specific gravity of minerals and the methods of its determination; pycnometers; the use of heavy liquids. Hardness and its determination; forms assumed by minerals; peculiarities of smell, taste and touch; magnetic and electrical properties of minerals; cleavage and its determination.

Classification of minerals based on their chemical composition; action of acids on minerals; the blowpipe and its use, with the principal reagents; this knowledge will be tested by powdered specimens being sent for examination by the candidate. The comparative fusibility, the effect of heating in closed and open tubes, the colour given to the flame, the encrustation and metallic beads on charcoal, the effects of fusing metallic oxides with borax and with microcosmic salt, should be clearly stated.

Isomorphism; variation in angular measurements; polymorphism (examples of dimorphism and trimorphism); pseudomorphism, its varieties and mode of origin of each kind.

Optical characters of minerals. Lustre; translucency; colour (essential and accidental); refractive index; double refraction; pleochroism (examples of dichroism and trichroism); polariscopes.

A knowledge of the characters exhibited by common minerals (especially of the rock-forming minerals and ores) will be tested by specimens being supplied for determination by inspection.

Higher Examination.

A more complete knowledge of the principles and methods of crystallography and crystal-notation and calculation; different forms of goniometers; possible groups of crystals.

The symmetry of crystals as determined by hardness figures and etched figures, natural and artificial; the sclerometer; parting planes and the means by which they are developed.

Optical characters of minerals. Reflectometers, polariscopes, stauroscopes, dichroscopes, wedges, and their uses; observations in parallel and convergent light; interference figures; circular polarisation, right- and left-handed; formation of Airy's spirals.

Isomorphism; polymorphism; isodimorphism; as illustrated in different groups of minerals; pleochroism exhibited in face and axis

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colours; pyroelectricity and its relation to hemimorphism; the chemical changes which minerals undergo; pseudomorphism.

Lamellar and multiple twinning. Effects of heat on minerals; optical anomalies, and the explanations proposed to account for them.

A knowledge of all the minerals described in ordinary manuals is required, with an acquaintance with the chief varieties of the most important of them.

Special familiarity is required with minerals of economic value and with their uses. Ores, gems and the minerals employed as sources of aluminium, magnesium, sodium, tungsten, tantalum, uranium, thorium, radium, &c. Minerals used as abrasives, pigments, &c.

FREEHAND DRAWING.

Each candidate will be expected to draw in outline on a half imperial sheet of paper A and either B or C:—

A. A group of simple objects placed before him as seen from the point of view at which he may be seated.

B. Simple scientific apparatus from memory or sketches illustrating some subject of the subsequent competitive examination;

or

C. A pictorial sketch of some simple and common machine or engine detail, working drawings of which will be supplied.

No instruments may be brought into the examination room except pen, pencil, and india-rubber. All ruling, measuring, and other mechanical aids are forbidden at the examination.

USEFUL CONSTANTS AND MATHEMATICAL TABLES.*

If any Examination Paper contains questions for the solution of which Useful Constants and Mathematical Tables are necessary, a copy of the Tables will be supplied to each candidate taking that paper.

Every student who studies the properties of steam should habitually use a Steam Table.

USEFUL CONSTANTS.

(Many of the more fundamental data given here should become, by repeated use, part of the mental equipment of technical students. They are given in this place for convenience of reference.)

1 Inch = 25.40 millimetres. 1 mm. = .03937 inch.

1 Gallon = .1604 cubic foot = 10 lb. of water at 62° F.

1 Knot = 6080 feet per hour = 1 Nautical mile per hour.

Weight of 1 lb. in London = 445,000 dynes.

One pound avoirdupois = 7000 grains = 453.6 grammes.

1 Cubic foot of water weighs 62.3 lb.

1 Cubic foot of air at 0° C. and 1 atmosphere, weighs .0807 lb.

1 Cubic foot of Hydrogen at 0° C. and 1 atmosphere, weighs .00559 lb.

1 Foot-pound = 1.3562×10^7 ergs.

1 Horse-power-hour = 33000×60 foot-pounds.

1 Electrical unit = 1000 watt-hours = 1.34 horse-power-hours.

1 Joule's Equivalent is $\begin{cases} 778 \text{ ft.-lb.} = 1 \text{ Fah. unit.} \\ 1400 \text{ ft.-lb.} = 1 \text{ Cent. "} \end{cases}$

1 Horse-power = 33000 foot-pounds per minute = 746 watts.

Volts \times ampères = watts.

1 Atmosphere = 14.7 lb. per square inch = 2116 lb. per square foot = 760 mm. of mercury = 10^6 dynes per sq. cm. nearly.

A column of water 2.3 feet high corresponds to a pressure of 1 lb. per sq. inch.

Absolute temp., $t = \theta^\circ \text{ C.} + 273^\circ$ or $\theta^\circ \text{ F.} + 459.4^\circ$.

$\pi = 3.1416$.

One radian = 57.30 degrees.

To convert common into Napierian logarithms, multiply by 2.3026.

The base of the Napierian logarithms is $e = 2.7183$.

The value of g at London = 32.182 feet per sec. per sec.

* These "Useful Constants and Mathematical Tables" are also published separately, and may be purchased either directly or through any Bookseller, from Wynman and Sons, Ltd., Fetter Lane, E.C.4, and 54, St. Mary Street, Cardiff; or H.M. Stationery Office (Scottish Branch), 23, North Street, Edinburgh; or E. Ponsonby, Ltd., 116, Grafton Street, Dublin. Price 1d., or 5s. per 100.

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	0	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
10	0000	0043	0086	0128	0170	0212	0253	0294	0334	0374	4	9	13	17	21	26	30	34	38
11	0414	0453	0492	0531	0569	0607	0645	0683	0719	0755	4	8	12	16	20	24	28	32	36
12	0792	0828	0864	0899	0934	0968	1004	1038	1072	1106	3	7	11	14	18	22	26	30	34
13	1139	1173	1206	1239	1271	1303	1335	1367	1399	1430	3	7	10	13	16	20	23	26	29
14	1461	1492	1523	1553	1584	1614	1644	1673	1703	1732	3	6	9	12	15	18	21	24	27
15	1761	1790	1818	1847	1875	1903	1931	1959	1987	2014	3	6	9	11	14	17	20	23	26
16	2041	2068	2095	2122	2148	2175	2201	2227	2253	2279	3	5	8	11	14	16	19	22	25
17	2304	2330	2355	2380	2405	2430	2455	2480	2504	2529	3	5	8	10	13	15	18	21	24
18	2553	2577	2601	2625	2648	2672	2695	2718	2742	2765	2	5	7	9	12	14	16	19	22
19	2788	2810	2833	2856	2878	2900	2923	2945	2967	2989	2	4	7	9	11	13	15	17	20
20	3010	3032	3054	3075	3096	3118	3139	3160	3181	3201	2	4	6	8	11	13	15	17	20
21	3222	3243	3263	3284	3304	3324	3345	3365	3385	3404	2	4	6	8	10	12	14	16	18
22	3424	3444	3464	3483	3502	3522	3541	3560	3579	3598	2	4	6	8	10	12	14	16	18
23	3617	3636	3655	3674	3692	3711	3729	3747	3766	3784	2	4	6	7	9	11	13	15	17
24	3802	3820	3838	3856	3874	3892	3909	3927	3945	3962	2	4	5	7	9	11	12	14	16
25	3979	3997	4014	4031	4048	4065	4082	4099	4116	4133	2	3	5	7	9	11	12	14	16
26	4150	4166	4183	4200	4216	4232	4249	4265	4281	4298	2	3	5	7	8	10	11	13	15
27	4314	4330	4346	4362	4378	4393	4409	4425	4440	4456	2	3	5	6	8	9	11	12	14
28	4472	4487	4502	4518	4533	4548	4564	4579	4594	4609	2	3	5	6	8	9	11	12	14
29	4624	4639	4654	4669	4683	4698	4713	4728	4742	4757	1	3	4	6	7	9	10	12	14
30	4771	4786	4800	4814	4829	4843	4857	4871	4886	4900	1	3	4	6	7	9	10	12	14
31	4914	4928	4942	4955	4969	4983	4997	5011	5024	5038	1	3	4	6	7	8	10	11	13
32	5051	5065	5079	5092	5105	5119	5132	5145	5159	5172	1	3	4	6	7	8	9	11	12
33	5186	5199	5211	5224	5237	5250	5263	5276	5289	5302	1	3	4	5	6	8	9	10	12
34	5315	5328	5340	5353	5366	5378	5391	5403	5416	5428	1	3	4	5	6	8	9	10	12
35	5441	5453	5465	5478	5490	5502	5514	5527	5539	5551	1	2	4	5	6	7	9	10	12
36	5563	5575	5587	5599	5611	5623	5635	5647	5658	5670	1	2	4	5	6	7	8	10	12
37	5682	5694	5705	5717	5729	5740	5752	5763	5775	5786	1	2	3	5	6	7	8	9	11
38	5798	5809	5821	5832	5843	5854	5865	5877	5888	5899	1	2	3	5	6	7	8	9	11
39	5911	5922	5933	5944	5955	5966	5977	5988	5999	6010	1	2	3	4	5	7	8	9	11
40	6021	6031	6042	6053	6064	6075	6085	6096	6107	6117	1	2	3	4	5	6	8	9	11
41	6128	6138	6149	6160	6170	6180	6191	6201	6212	6222	1	2	3	4	5	6	7	9	11
42	6232	6243	6253	6263	6274	6284	6294	6304	6314	6325	1	2	3	4	5	6	7	8	10
43	6335	6345	6355	6365	6375	6385	6395	6405	6415	6425	1	2	3	4	5	6	7	8	10
44	6435	6444	6454	6464	6474	6484	6493	6503	6513	6522	1	2	3	4	5	6	7	8	10
45	6532	6542	6551	6561	6571	6580	6590	6599	6609	6618	1	2	3	4	5	6	7	8	10
46	6628	6637	6646	6656	6665	6675	6684	6693	6702	6712	1	2	3	4	5	6	7	8	10
47	6721	6730	6739	6749	6758	6767	6776	6785	6794	6803	1	2	3	4	5	6	7	8	10
48	6812	6821	6830	6839	6848	6857	6866	6875	6884	6893	1	2	3	4	5	6	7	8	10
49	6902	6911	6920	6928	6937	6946	6955	6964	6972	6981	1	2	3	4	5	6	7	8	10
50	6990	6998	7007	7016	7024	7033	7042	7050	7059	7067	1	2	3	4	5	6	7	8	10

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LOGARITHMS.

	0	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
7076	7084	7093	7101	7110	7118	7126	7135	7143	7152	1	2	3	3	4	5	6	7	8	
7160	7168	7177	7185	7193	7202	7210	7218	7226	7235	1	2	3	3	4	5	6	7	7	
7243	7251	7259	7267	7275	7284	7292	7300	7308	7316	1	2	3	3	4	5	6	6	7	
7324	7332	7340	7348	7356	7364	7372	7380	7388	7396	1	2	3	3	4	5	6	6	7	
7401	7412	7419	7427	7435	7443	7451	7459	7466	7474	1	2	2	3	3	5	5	6	7	
7482	7490	7497	7505	7513	7520	7528	7536	7543	7551	1	2	2	3	4	5	5	6	7	
7559	7566	7574	7582	7589	7597	7604	7612	7619	7627	1	2	2	3	4	5	5	6	7	
7634	7642	7649	7657	7664	7672	7679	7686	7694	7701	1	1	2	3	4	4	5	6	7	
7709	7716	7723	7731	7738	7745	7752	7760	7767	7774	1	1	2	3	4	4	5	6	7	
7782	7789	7796	7803	7810	7818	7825	7832	7839	7846	1	1	2	3	4	4	5	6	6	
7853	7860	7868	7875	7883	7889	7896	7903	7910	7917	1	1	2	3	4	4	5	6	6	
7924	7931	7938	7945	7952	7959	7966	7973	7980	7987	1	1	2	3	3	4	5	6	6	
7993	8000	8007	8014	8021	8028	8035	8041	8048	8055	1	1	2	3	3	4	5	6	6	
8062	8069	8075	8082	8089	8096	8102	8109	8116	8122	1	1	2	3	3	4	5	5	6	
8129	8136	8142	8149	8156	8162	8169	8176	8182	8189	1	1	2	3	3	4	5	5	6	
8195	8202	8209	8215	8222	8228	8235	8241	8248	8254	1	1	2	3	3	4	5	5	6	
8261	8267	8274	8280	8287	8293	8299	8306	8312	8319	1	1	2	3	3	4	5	5	6	
8325	8331	8338	8344	8351	8357	8363	8370	8376	8382	1	1	2	3	3	4	4	5	6	
8388	8395	8401	8407	8414	8420	8426	8432	8439	8445	1	1	2	2	3	4	4	5	6	
8451	8457	8463	8470	8476	8482	8489	8494	8500	8506	1	1	2	2	3	4	4	5	6	
8513	8519	8525	8531	8537	8543	8549	8555	8561	8567	1	1	2	2	3	4	4	5	6	
8573	8579	8585	8591	8597	8603	8609	8615	8621	8627	1	1	2	2	3	4	4	5	6	
8633	8639	8645	8651	8657	8663	8669	8675	8681	8686	1	1	2	2	3	4	4	5	6	
8692	8698	8704	8710	8716	8722	8727	8733	8739	8745	1	1	2	2	3	4	4	5	6	
8751	8756	8762	8768	8774	8779	8785	8791	8797	8802	1	1	2	2	3	3	4	5	6	
8808	8814	8820	8825	8831	8837	8842	8848	8854	8859	1	1	2	2	3	3	4	5	6	
8865	8871	8876	8882	8887	8893	8899	8904	8910	8915	1	1	2	2	3	3	4	4	5	
8921	8927	8932	8938	8943	8949	8954	8960	8965	8971	1	1	2	2	3	3	4	4	5	
8976	8982	8987	8993	8998	9004	9009	9015	9020	9025	1	1	2	2	3	3	4	4	5	
9031	9036	9042	9047	9053	9058	9063	9069	9074	9079	1	1	2	2	3	3	4	4	5	
9085	9090	9096	9101	9106	9112	9117	9122	9128	9133	1	1	2	2	3	3	4	4	5	
9138	9143	9149	9154	9159	9165	9170	9175	9180	9186	1	1	2	2	3	3	4	4	5	
9191	9196	9201	9206	9212	9217	9222	9227	9232	9238	1	1	2	2	3	3	4	4	5	
9243	9248	9253	9258	9263	9269	9274	9279	9284	9289	1	1	2	2	3	3	4	4	5	
9294	9299	9304	9309	9315	9320	9325	9330	9335	9340	1	1	2	2	3	3	4	4	5	
9345	9350	9355	9360	9365	9370	9375	9380	9385	9390	1	1	2	2	3	3	4	4	5	
9395	9400	9405	9410	9415	9420	9425	9430	9435	9440	0	1	1	2	2	3	3	4	4	
9445	9450	9455	9460	9465	9469	9474	9479	9484	9489	0	1	1	2	2	3	3	4	4	
9494	9499	9504	9509	9513	9518	9523	9528	9533	9538	0	1	1	2	2	3	3	4	4	
9542	9547	9552	9557	9562	9566	9571	9576	9581	9586	0	1	1	2	2	3	3	4	4	
9590	9595	9600	9605	9609	9614	9619	9624	9628	9633	0	1	1	2	2	3	3	4	4	
9638	9643	9647	9652	9657	9661	9666	9671	9675	9680	0	1	1	2	2	3	3	4	4	
9685	9690	9694	9699	9703	9708	9713	9717	9722	9727	0	1	1	2	2	3	3	4	4	
9731	9736	9741	9745	9750	9754	9759	9763	9768	9773	0	1	1	2	2	3	3	4	4	
9777	9782	9786	9791	9795	9800	9805	9809	9814	9818	0	1	1	2	2	3	3	4	4	
9823	9827	9832	9836	9841	9845	9850	9854	9859	9863	0	1	1	2	2	3	3	4	4	
9868	9872	9877	9881	9886	9890	9894	9899	9903	9908	0	1	1	2	2	3	3	4	4	
9912	9917	9921	9926	9930	9934	9939	9943	9948	9952	0	1	1	2	2	3	3	4	4	
9956	9961	9965	9969	9973	9978	9982	9987	9991	9996	0	1	1	2	2	3	3	4	4	

EMPLOY.

LOANS. MUS

TT. ELY.

CODE.

EXAM. REGS
ART.

MEDICAL.

SCHPS. ART.

BD.
DE.

IAT. COMP.

PL. GRANTS

ART
CHRS. CENTS.

T. DS.

R. CL

SCHS.

U. GRANTS.

PREL. D.

WHIT.

SCHPS. SCI.

ANTILOGARITHMS.

	0	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
·00	1000	1002	1005	1007	1009	1013	1014	1016	1019	1021	0	0	1	1	1	1	2	2	2
·01	1023	1026	1028	1030	1033	1035	1038	1040	1042	1045	0	0	1	1	1	1	2	2	2
·02	1047	1050	1052	1054	1057	1059	1062	1064	1067	1069	0	0	1	1	1	1	2	2	2
·03	1072	1074	1076	1079	1081	1084	1086	1089	1091	1094	0	0	1	1	1	1	2	2	2
·04	1096	1099	1102	1104	1107	1109	1112	1114	1117	1119	0	1	1	1	1	1	2	2	2
·05	1122	1125	1127	1130	1132	1135	1138	1140	1143	1146	0	1	1	1	1	1	2	2	2
·06	1148	1151	1153	1156	1159	1161	1164	1167	1169	1172	0	1	1	1	1	1	2	2	2
·07	1175	1178	1180	1183	1186	1189	1191	1194	1197	1199	0	1	1	1	1	1	2	2	2
·08	1202	1205	1208	1211	1213	1216	1219	1222	1225	1227	0	1	1	1	1	1	2	2	2
·09	1230	1233	1236	1239	1242	1245	1247	1250	1253	1256	0	1	1	1	1	1	2	2	2
·10	1259	1262	1265	1268	1271	1274	1276	1279	1282	1285	0	1	1	1	1	1	2	2	2
·11	1288	1291	1294	1297	1300	1302	1305	1308	1311	1315	0	1	1	1	1	1	2	2	2
·12	1318	1321	1324	1327	1330	1334	1337	1340	1343	1346	0	1	1	1	1	1	2	2	2
·13	1349	1352	1355	1358	1361	1365	1368	1371	1374	1377	0	1	1	1	1	1	2	2	2
·14	1380	1384	1387	1390	1393	1396	1400	1403	1406	1409	0	1	1	1	1	1	2	2	2
·15	1413	1416	1419	1422	1426	1429	1432	1435	1439	1442	0	1	1	1	1	1	2	2	2
·16	1445	1449	1452	1455	1459	1462	1466	1469	1472	1476	0	1	1	1	1	1	2	2	2
·17	1479	1483	1486	1489	1493	1496	1500	1503	1507	1510	0	1	1	1	1	1	2	2	2
·18	1514	1517	1521	1524	1528	1531	1535	1538	1542	1545	0	1	1	1	1	1	2	2	2
·19	1549	1552	1556	1560	1563	1567	1570	1574	1578	1581	0	1	1	1	1	1	2	2	2
·20	1585	1589	1592	1596	1600	1603	1607	1611	1614	1618	0	1	1	1	1	1	2	2	2
·21	1622	1626	1629	1633	1637	1641	1644	1648	1652	1656	0	1	1	1	1	1	2	2	2
·22	1660	1663	1667	1671	1675	1679	1683	1687	1690	1694	0	1	1	1	1	1	2	2	2
·23	1698	1702	1706	1710	1714	1718	1722	1726	1730	1734	0	1	1	1	1	1	2	2	2
·24	1738	1742	1746	1750	1754	1758	1762	1766	1770	1774	0	1	1	1	1	1	2	2	2
·25	1778	1782	1786	1791	1795	1799	1803	1807	1811	1816	0	1	1	1	1	1	2	2	2
·26	1820	1824	1828	1832	1837	1841	1845	1849	1854	1858	0	1	1	1	1	1	2	2	2
·27	1862	1866	1871	1875	1879	1884	1888	1892	1897	1901	0	1	1	1	1	1	2	2	2
·28	1905	1910	1914	1919	1923	1928	1932	1936	1941	1945	0	1	1	1	1	1	2	2	2
·29	1950	1954	1959	1963	1968	1972	1977	1982	1986	1991	0	1	1	1	1	1	2	2	2
·30	1995	2000	2004	2009	2014	2018	2023	2028	2032	2037	0	1	1	1	1	1	2	2	2
·31	2042	2046	2051	2056	2061	2065	2070	2075	2080	2084	0	1	1	1	1	1	2	2	2
·32	2089	2094	2099	2104	2109	2113	2118	2123	2128	2133	0	1	1	1	1	1	2	2	2
·33	2138	2143	2148	2153	2158	2163	2168	2173	2178	2183	0	1	1	1	1	1	2	2	2
·34	2188	2193	2198	2203	2208	2213	2218	2223	2228	2234	1	1	2	2	2	2	3	3	3
·35	2239	2244	2249	2254	2259	2265	2270	2275	2280	2286	1	1	2	2	2	2	3	3	3
·36	2291	2296	2301	2307	2312	2317	2323	2328	2333	2339	1	1	2	2	2	2	3	3	3
·37	2344	2349	2355	2360	2366	2371	2377	2382	2388	2393	1	1	2	2	2	2	3	3	3
·38	2399	2404	2410	2415	2421	2427	2432	2438	2443	2449	1	1	2	2	2	2	3	3	3
·39	2455	2460	2466	2472	2477	2483	2489	2495	2500	2506	1	1	2	2	2	2	3	3	3
·40	2512	2518	2523	2529	2535	2541	2547	2553	2559	2564	1	1	2	2	2	2	3	3	3
·41	2570	2576	2582	2588	2594	2600	2606	2612	2618	2624	1	1	2	2	2	2	3	3	3
·42	2630	2636	2642	2649	2655	2661	2667	2673	2679	2685	1	1	2	2	2	2	3	3	3
·43	2692	2698	2704	2710	2716	2723	2729	2735	2742	2748	1	1	2	2	2	2	3	3	3
·44	2754	2761	2767	2773	2780	2786	2793	2799	2806	2812	1	1	2	2	2	2	3	3	3
·45	2818	2825	2831	2838	2844	2851	2858	2864	2871	2877	1	1	2	2	2	2	3	3	3
·46	2884	2891	2897	2904	2911	2917	2924	2931	2938	2944	1	1	2	2	2	2	3	3	3
·47	2951	2958	2965	2972	2979	2985	2992	2999	3006	3013	1	1	2	2	2	2	3	3	3
·48	3020	3027	3034	3041	3048	3055	3062	3069	3076	3083	1	1	2	2	2	2	3	3	3
·49	3090	3097	3105	3112	3119	3126	3133	3141	3148	3156	1	1	2	2	2	2	3	3	3

ANTILOGARITHMS.

	0	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
50	3162	3170	3177	3184	3192	3199	3206	3214	3221	3228	1	2	3	4	5	6	7	8	9
51	3236	3243	3251	3258	3266	3273	3281	3289	3296	3304	1	2	3	4	5	6	7	8	9
52	3311	3319	3327	3334	3342	3350	3357	3365	3373	3381	1	2	3	4	5	6	7	8	9
53	3388	3396	3404	3412	3420	3428	3436	3443	3451	3459	1	2	3	4	5	6	7	8	9
54	3467	3475	3483	3491	3499	3508	3516	3524	3532	3540	1	2	3	4	5	6	7	8	9
55	3548	3556	3565	3573	3581	3589	3597	3606	3614	3622	1	2	3	4	5	6	7	8	9
56	3631	3639	3648	3656	3664	3673	3681	3690	3698	3707	1	2	3	4	5	6	7	8	9
57	3715	3724	3733	3741	3750	3758	3767	3776	3784	3793	1	2	3	4	5	6	7	8	9
58	3802	3811	3819	3828	3837	3846	3855	3864	3873	3882	1	2	3	4	5	6	7	8	9
59	3890	3899	3908	3917	3926	3936	3945	3954	3963	3972	1	2	3	4	5	6	7	8	9
60	3981	3990	3999	4009	4018	4027	4036	4046	4055	4064	1	2	3	4	5	6	7	8	9
61	4074	4083	4093	4102	4111	4121	4130	4140	4150	4159	1	2	3	4	5	6	7	8	9
62	4169	4178	4188	4198	4207	4217	4227	4236	4246	4256	1	2	3	4	5	6	7	8	9
63	4266	4276	4285	4295	4305	4315	4325	4335	4345	4355	1	2	3	4	5	6	7	8	9
64	4365	4375	4385	4395	4406	4416	4426	4436	4446	4457	1	2	3	4	5	6	7	8	9
65	4467	4477	4487	4498	4508	4519	4529	4539	4550	4560	1	2	3	4	5	6	7	8	9
66	4571	4581	4592	4603	4613	4624	4634	4645	4656	4667	1	2	3	4	5	6	7	9	10
67	4677	4688	4699	4710	4721	4732	4743	4753	4764	4775	1	2	3	4	5	6	7	9	10
68	4786	4797	4808	4819	4831	4842	4853	4864	4875	4887	1	2	3	4	5	6	7	9	10
69	4898	4909	4920	4932	4943	4955	4966	4977	4989	5000	1	2	3	5	6	7	8	9	10
70	5012	5023	5035	5047	5058	5070	5082	5093	5105	5117	1	2	4	5	6	7	8	9	11
71	5129	5140	5152	5164	5176	5188	5200	5212	5224	5236	1	2	4	5	6	7	8	10	11
72	5248	5260	5272	5284	5297	5309	5321	5333	5346	5358	1	2	4	5	6	7	9	10	11
73	5371	5383	5395	5408	5420	5433	5445	5458	5470	5483	1	2	4	5	6	8	9	10	11
74	5495	5508	5521	5534	5546	5559	5572	5585	5598	5610	1	2	4	5	6	8	9	10	12
75	5623	5636	5649	5662	5675	5689	5703	5715	5728	5741	1	2	4	5	7	8	9	10	12
76	5754	5768	5781	5794	5808	5821	5834	5848	5861	5875	1	2	4	5	7	8	9	11	12
77	5888	5902	5916	5929	5943	5957	5970	5984	5998	6012	1	2	4	5	7	8	10	11	12
78	6026	6040	6053	6067	6081	6095	6109	6124	6138	6152	1	2	4	6	7	8	10	11	13
79	6166	6180	6194	6209	6223	6237	6252	6266	6281	6295	1	2	4	6	7	9	10	11	13
80	6310	6324	6339	6353	6368	6383	6397	6412	6427	6442	1	2	4	6	7	9	10	12	13
81	6457	6471	6486	6501	6516	6531	6546	6561	6577	6592	2	2	5	6	8	9	11	12	14
82	6607	6622	6637	6653	6668	6683	6699	6714	6730	6745	2	2	5	6	8	9	11	12	14
83	6761	6776	6792	6808	6823	6839	6855	6871	6887	6902	2	2	5	6	8	9	11	13	14
84	6918	6934	6950	6966	6982	6998	7015	7031	7047	7063	2	2	5	6	8	10	11	13	15
85	7079	7096	7112	7129	7146	7161	7178	7194	7211	7228	2	2	5	7	8	10	12	13	15
86	7244	7261	7278	7295	7311	7328	7345	7362	7379	7396	2	2	5	7	8	10	12	13	15
87	7413	7430	7447	7464	7482	7499	7516	7534	7551	7568	2	2	5	7	9	10	12	14	16
88	7586	7603	7621	7638	7656	7674	7691	7709	7727	7745	2	2	5	7	9	11	13	14	16
89	7762	7780	7798	7816	7834	7852	7870	7889	7907	7925	2	2	5	7	9	11	13	14	16
90	7943	7962	7980	7998	8017	8035	8054	8072	8091	8110	2	2	5	7	9	11	13	15	17
91	8128	8147	8166	8185	8204	8223	8241	8260	8279	8299	2	2	5	8	9	11	13	15	17
92	8318	8337	8356	8375	8395	8414	8433	8453	8472	8492	2	2	5	8	10	12	14	16	17
93	8511	8531	8551	8570	8590	8610	8630	8650	8670	8690	2	2	5	8	10	12	14	16	18
94	8710	8730	8750	8770	8790	8810	8831	8851	8872	8892	2	2	5	8	10	12	14	16	18
95	8913	8933	8954	8974	8995	9016	9036	9057	9078	9099	2	2	5	8	10	12	15	17	19
96	9120	9141	9162	9183	9204	9226	9247	9268	9290	9311	2	2	5	8	11	13	15	17	19
97	9332	9354	9376	9397	9419	9441	9463	9484	9506	9528	2	2	5	7	9	11	13	16	17
98	9550	9572	9594	9616	9638	9661	9683	9705	9727	9750	2	2	5	7	9	11	13	16	18
99	9772	9795	9817	9840	9863	9886	9908	9931	9954	9977	2	2	5	7	9	11	14	16	18

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Angle.		Chord.	Sine.	Tangent.	Co-tangent.	Cosine.			
De- grees.	Radians.								
0°	0	0	0	0	∞	1	1.414	1.4708	
1	.0175	.017	.0175	.0175	57.2900	.9998	1.402	1.5523	
2	.0349	.035	.0349	.0349	28.6363	.9994	1.389	1.5350	
3	.0524	.052	.0523	.0524	19.0811	.9986	1.377	1.5184	
4	.0698	.070	.0698	.0699	14.3007	.9976	1.364	1.5010	
5	.0873	.087	.0872	.0875	11.4301	.9962	1.351	1.4835	
6	.1047	.105	.1045	.1051	9.5144	.9945	1.338	1.4661	
7	.1222	.122	.1219	.1228	8.1443	.9925	1.325	1.4486	
8	.1396	.140	.1392	.1405	7.1154	.9903	1.312	1.4312	
9	.1571	.157	.1564	.1584	6.3138	.9877	1.299	1.4137	
10	.1745	.174	.1736	.1763	5.6713	.9848	1.286	1.3963	
11	.1920	.192	.1908	.1944	5.1446	.9816	1.272	1.3788	
12	.2094	.209	.2079	.2126	4.7046	.9781	1.259	1.3614	
13	.2269	.226	.2250	.2309	4.3315	.9744	1.245	1.3440	
14	.2443	.244	.2419	.2493	4.0108	.9703	1.231	1.3265	
15	.2618	.261	.2588	.2679	3.7321	.9659	1.218	1.3090	
16	.2793	.278	.2756	.2867	3.4874	.9613	1.204	1.2915	
17	.2967	.296	.2924	.3067	3.2709	.9563	1.190	1.2741	
18	.3142	.313	.3090	.3249	3.0777	.9511	1.176	1.2566	
19	.3316	.330	.3256	.3443	2.9042	.9455	1.161	1.2392	
20	.3491	.347	.3420	.3640	2.7475	.9397	1.147	1.2217	
21	.3665	.364	.3584	.3839	2.6051	.9336	1.133	1.2043	
22	.3840	.382	.3746	.4040	2.4751	.9272	1.118	1.1868	
23	.4014	.399	.3907	.4245	2.3559	.9205	1.104	1.1694	
24	.4189	.416	.4067	.4452	2.2460	.9135	1.089	1.1519	
25	.4363	.433	.4228	.4663	2.1445	.9063	1.075	1.1345	
26	.4538	.450	.4384	.4877	2.0503	.8988	1.060	1.1170	
27	.4712	.467	.4540	.5095	1.9626	.8910	1.045	1.0996	
28	.4887	.484	.4695	.5317	1.8807	.8829	1.030	1.0821	
29	.5061	.501	.4848	.5543	1.8040	.8746	1.015	1.0647	
30	.5236	.518	.5000	.5774	1.7321	.8660	1.000	1.0472	
31	.5411	.534	.5150	.6009	1.6643	.8572	.985	1.0297	
32	.5586	.551	.5299	.6249	1.6003	.8480	.970	1.0123	
33	.5760	.568	.5466	.6494	1.5399	.8387	.954	.9948	
34	.5934	.585	.5592	.6745	1.4826	.8290	.939	.9774	
35	.6109	.601	.5736	.7002	1.4281	.8192	.923	.9599	
36	.6283	.618	.5878	.7265	1.3764	.8090	.908	.9425	
37	.6458	.635	.6018	.7536	1.3270	.7986	.892	.9250	
38	.6632	.651	.6167	.7813	1.2799	.7880	.877	.9076	
39	.6807	.668	.6293	.8098	1.2349	.7771	.861	.8901	
40	.6981	.684	.6428	.8391	1.1913	.7660	.845	.8727	
41	.7156	.700	.6561	.8693	1.1504	.7547	.829	.8552	
42	.7330	.717	.6691	.9004	1.1106	.7431	.813	.8378	
43	.7505	.733	.6820	.9325	1.0724	.7314	.797	.8203	
44	.7679	.749	.6947	.9657	1.0355	.7193	.781	.8029	
45°	.7854	.765	.7071	1.0000	1.0000	.7071	.765	.7854	
			Cosine	Co-tangent	Tangent	Sine	Chord	Radians	Angle

TIME TABLE OF EXAMINATIONS IN SCIENCE AND TECHNOLOGY, 1915.

(a) Qualifying Examinations held only for Candidates for Royal Scholarships and Free Studentships, &c.

N.B.—These examinations are held under the provisions of the Regulations for Scholarships, &c., in Science, 1915. Those competitors who are required to attend the Qualifying Examinations are duly notified to that effect by the Board of Education. Candidates taking Freehand Drawing in the competition for Sir Joseph Whitworth's Scholarships and Exhibitions will take the examination on Monday, March 1st, as the Competitive Examination in that subject.

1915.

1st Mar., Monday - 7 to 9.30 p.m.

FREEHAND DRAWING.

Pen, pencil, and india-rubber will be required.

2nd „ Tuesday - 7 to 10 p.m.

MAGNETISM AND ELECTRICITY.

3rd „ Wednesday 7 to 10 p.m.

MECHANICS (SOLIDS).

Compasses, a scale of equal parts, and a protractor will be required.

4th „ Thursday - 7 to 10 p.m.

MECHANICS (FLUIDS).

Compasses, a scale of equal parts, and a protractor will be required.

5th „ Friday - 7 to 10 p.m.

SOUND, LIGHT, AND HEAT.

6th „ Saturday - 6 to 8 p.m. ;

ENGLISH.

Two papers will be set, and both must be taken.

7th „ Monday - 7 to 10 p.m.

CHEMISTRY.

8th „ Tuesday - 7 to 10 p.m.

MATHEMATICS.

Compasses, and a straight edge, will be required by candidates taking the paper for competitors in Groups D (Biology) and E (Geology).

Compasses, and a straight edge with a scale of equal parts and a protractor, will be required by candidates taking the paper for competitors in Groups A (Mechanics), B (Physics), and C (Chemistry).

(b) General Examinations.

N.B.—Intending candidates should read the notes on page 83.

1915.

3rd May, Wednesday 7 to 10 p.m.

THEORETICAL MECHANICS (FLUIDS).

Compasses, a scale of equal parts, and a protractor will be required.

4th „ Thursday - 7 to 10 p.m.

THEORETICAL MECHANICS (SOLIDS).

Compasses, a scale of equal parts, and a protractor will be required.

5th „ Friday - 7 to 10 p.m.

MAGNETISM AND ELECTRICITY.

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(b) GENERAL EXAMINATIONS—*continued.*1915.

8th May, Saturday	}	6 to 10 p.m.	PRACTICAL GEOMETRY AND GRAPHICS. Sets of scales (<i>see</i> Syllabus of subject) and a protractor will be required. Slide rules may be used. Mathematical Tables will be provided with the examination papers.
		7 to 10 p.m.	COAL MINING.
10th „ Monday	-	7 to 10 p.m.	PURE MATHEMATICS—LOWER AND HIGHER.—Paper I. Compasses, a straight edge with a scale of equal parts, and a protractor will be required. Mathematical Tables will be provided with the examination papers.
11th „ Tuesday	-	7 to 10 p.m.	PURE MATHEMATICS—HIGHER.—Paper II. Compasses, a straight edge with a scale of equal parts, and a protractor will be required. Mathematical Tables will be provided with the examination papers.
12th „ Wednesday		7 to 10 p.m.	HEAT.
13th „ Thursday		7 to 10 p.m.	{ ORGANIC CHEMISTRY. METALLURGY.
14th „ Friday		7 to 10 p.m.	INORGANIC CHEMISTRY.
15th „ Saturday	}	6 to 10 p.m.	BUILDING CONSTRUCTION. Drawing instruments (<i>see</i> Syllabus of subject) and scales, and protractors will be required. Slide rules may be used. Mathematical tables will be provided with the Higher Examination papers.
			NAVAL ARCHITECTURE. Scales, set squares, and sliding curves will be required (<i>see</i> Syllabus of subject). Slide rules may be used. Mathematical tables will be provided with the examination papers.
			MACHINE CONSTRUCTION AND DRAWING. Indian ink and scales (<i>see</i> Syllabus of subject) will be required. Slide rules may be used. Tracing paper will be supplied for candidates in the Lower Examination. Mathematical Tables will be provided with the Higher Examination papers.
17th „ Monday	-	7 to 10 p.m.	PRACTICAL MATHEMATICS. Slide rules may be used. Mathematical Tables will be provided with the examination papers.
18th „ Tuesday	-	7 to 10 p.m.	APPLIED MECHANICS (MATERIALS AND STRUCTURES). Slide rules may be used. Mathematical Tables will be provided with the examination papers.
19th „ Wednesday		7 to 10 p.m.	APPLIED MECHANICS (MACHINES AND HYDRAULICS). Slide rules may be used. Mathematical Tables will be provided with the examination papers.

(b) GENERAL EXAMINATIONS—*continued.*

1915.

20th May, Thursday - 7 to 10 p.m.

HEAT ENGINES.

Slide rules may be used. Mathematical Tables will be provided with the examination papers. A temperature-entropy diagram will if necessary be issued to each candidate.

Note 1.—The conditions under which candidates are eligible for admission to the General Examinations, and the local arrangements under which the Examinations will be held, will be found in Sections 5-9 and 12-21 of the Regulations in this Volume. Intending candidates are recommended to acquaint themselves with the conditions as to age, fees, requirements as to previous study, the date by which, and the manner in which, application must be made, &c.

Note 2.—In each subject of the General Examinations there will be a Higher Examination and a Lower Examination. Two papers will be set in the Higher Examination in Pure Mathematics, and no candidate who does not reach the necessary standard in both papers will be adjudged to have passed the Examination.

(c) Competitive Examinations for Scholarships, Studentships, &c. in Science.

N.B.—Intending Competitors should read the Notes at the end of this Time Table (*see* page 85).

1915.

1st Mar., Monday - 7 to 9.30 p.m. - FREEHAND DRAWING.
1st May, Saturday - 2 to 10 p.m. - PRACTICAL METALLURGY.

—Higher Examination, 2 to 10 p.m.; Lower Examination, 5 to 10 p.m.
The use of note-books, text-books, or works of reference is permitted.

3rd „ Monday - 7 to 10 p.m. - { SOUND AND LIGHT.
MINERALOGY.

This examination will include practical blow-pipe analysis. Apparatus, &c. will be required. (*See* Syllabus of subject.)

4th „ Tuesday - 2.30 to 10.30 p.m. PRACTICAL INORGANIC CHEMISTRY. — Higher Examination, 2.30 to 10.30 p.m.; Lower Examination, 5.15 to 10.30 p.m.; (Written, 5.15 to 6.15; Practical, 6.30 to 10.30).

The use of note-books, text-books, or works of reference is permitted throughout the Higher Examination and during the practical part of the Lower Examination.

5th „ Wednesday 7 to 10 p.m. - { THEORETICAL MECHANICS (FLUIDS).
Compasses, a scale of equal parts, and a protractor will be required.
ZOOLOGY.

A microscope and dissecting instruments may be required by candidates in the Higher Examination.

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(c) COMPETITIVE EXAMINATIONS FOR SCHOLARSHIPS,
STUDENTSHIPS, &C. IN SCIENCE—*continued.*

1915.

6th May, Thursday	7 to 10 p.m.	-	THEORETICAL MECHANICS (SOLIDS). Compasses, a scale of equal parts, and a protractor will be required.
7th „ Friday	7 to 10 p.m.	-	GENERAL BIOLOGY. MAGNETISM AND ELECTRICITY. BOTANY.
8th „ Saturday	6 to 10 p.m.	-	PRACTICAL GEOMETRY AND GRAPHICS. Sets of scales (<i>see</i> Syllabus of subject) and a protractor will be required. Slide rules may be used. Mathematical tables will be provided with the examination papers.
10th „ Monday	7 to 10 p.m.	-	PURE MATHEMATICS, LOWER AND HIGHER—Paper I. Compasses, a straight edge with a scale of equal parts, and a protractor will be required. Mathematical tables will be provided with the examination papers.
11th „ Tuesday	7 to 10 p.m.	-	PURE MATHEMATICS, HIGHER—Paper II. Compasses, a straight edge with a scale of equal parts, and a protractor will be required. Mathematical tables will be provided with the examination papers.
12th „ Wednesday	7 to 10 p.m.	-	HEAT.
13th „ Thursday	7 to 10 p.m.	-	ORGANIC CHEMISTRY. METALLURGY.
14th „ Friday	7 to 10 p.m.	-	INORGANIC CHEMISTRY.
	2.30 to 10.30 p.m.	-	PRACTICAL ORGANIC CHEMISTRY.—Higher Examination, 2.30 to 10.30 p.m.; Lower Examination, 6 to 10.30 p.m.; (Written, 6 to 7; Practical, 7.15 to 10.30). The use of note-books, text-books, or works of reference is permitted throughout the Higher Examination and during the practical part of the Lower Examination.
15th „ Saturday		-	BUILDING CONSTRUCTION. Drawing instruments (<i>see</i> Syllabus of subject) and scales and protractors will be required. Slide rules may be used. Mathematical tables will be provided with the Higher Examination papers.
	6 to 10 p.m.	-	NAVAL ARCHITECTURE. Scales, set squares, and ship curves will be required (<i>see</i> Syllabus of subject). Slide rules may be used. Mathematical tables will be provided with the examination papers.
		-	MACHINE CONSTRUCTION AND DRAWING. Indian ink and scales (<i>see</i> Syllabus of subject) will be required. Slide rules may be used. Tracing paper will be supplied for candidates in the Lower Examination. Mathematical tables will be provided with the Higher Examination papers.

(c) COMPETITIVE EXAMINATIONS FOR SCHOLARSHIPS,
STUDENTSHIPS, &c. IN SCIENCE—*continued.*

1915.

7th May, Monday	- 7 to 10 p.m.	- PRACTICAL MATHEMATICS. Slide rules may be used. Mathematical tables will be provided with the examination papers.
8th .. Tuesday	- 7 to 10 p.m.	- { APPLIED MECHANICS (MATERIALS AND STRUCTURES). Slide rules may be used. Mathematical tables will be provided with the examination papers. HUMAN PHYSIOLOGY. A microscope will be required by candidates in the Higher Examination.
9th .. Wednesday	- 7 to 10 p.m.	- APPLIED MECHANICS (MACHINES AND HYDRAULICS). Slide rules may be used. Mathematical tables will be provided with the examination papers.
10th .. Thursday	- 7 to 10 p.m.	- { HEAT ENGINES. Slide rules may be used. Mathematical tables will be provided with the examination papers. A temperature-entropy diagram will if necessary be issued to each candidate. GEOLOGY.

Note 1.—These examinations are only held for—

(i) accepted candidates for Scholarships, Exhibitions, and Studentships, particulars of which are contained in the Board's Regulations for Scholarships, &c. in Science, 1915, and in the Prospectus of Sir Joseph Whitworth's Scholarships and Exhibitions (43rd edition), copies of which can be obtained on application to the Secretary, Board of Education, Whitehall, London, S.W.;

(ii) such Local Science Exhibitions, &c. as with the approval of the Board are awarded in connection with these examinations.

Note.—The examination in Freehand Drawing is only a Competitive Examination for candidates competing this year for the Whitworth Scholarships and Exhibitions.

Note 2.—In each subject, except General Biology and Freehand Drawing, in which only one examination is held, there will be a Higher and a Lower Examination. Two papers will be set in the Higher Examination in Pure Mathematics; and Candidates sitting for this Examination are expected to take both papers.

Note 3.—Candidates for Royal Scholarships, Free Studentships, and Whitworth Scholarships and Exhibitions must make application for admission to the Competition on the prescribed form (copies of which can be obtained from the Board) **not later than 1st January 1915.**

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Universities and Training and Examination of Teachers.

- Statement of Grants in aid of Technological and Professional Work in Universities [Cd. 6794.] Price 1d.; by post, 1½d.
- Regulations for Science Scholarships. Price 1d.; by post, 1½d.
- Prospectus of Whitworth Scholarships and Exhibitions. Price 1d.; by post, 1½d.
- Reports from Universities and University Colleges, 1911-12:—
Vol. I. [Cd. 7008.] Price 2s.; by post, 2s. 4d.
Vol. II. [Cd. 7009.] Price 1s. 10d.; by post, 2s. 2d.
- Report of Advisory Committee on distribution of Exchequer Grants to Universities, &c. [Cd. 6140.] Price 1½d.; by post, 2d. Second Report of ditto. [Cd. 6617.] Price 1d.; by post, 1½d. Third Report of ditto. [Cd. 6869.] Price 1½d.; by post, 2d.
- How to become a Teacher in a Public Elementary School. Price 4d.; by post, 5d.
- Regulations for the Training of Teachers for Elementary Schools, 1913. [Cd. 6795.] Price 6d.; by post, 8d.
- Regulations for the Training of Teachers of Domestic Subjects. [Cd. 4603.] Price 1½d.; by post, 2d.
- Regulations for Training of Teachers for Secondary Schools. [Cd. 6912.] Price 1d.; by post, 1½d.
- List of Training Colleges, &c. (Elementary), showing Accommodation, Fees, Courses, Examinations, and Accounts (List 175). Price 3d.; by post, 4½d.
- Syllabus of Preliminary Examination for Certificate, 1915. Price 1d.; by post, 1½d.
- Syllabuses of the Certificate Examinations, 1914 and 1915. Price 1d. each; by post, 1½d.
- Examination Papers set at the Preliminary Examination for the Elementary School Teachers' Certificate, 1913. Price 6d.; by post, 7d.
- Examination Papers set at the Certificate Examination, 1913. Price 6d.; by post, 7d.
- List of Persons who have passed the Preliminary Examination for the Elementary School Teachers' Certificate, 1913. [List 163, 1913.] Price 6d.; by post, 7d.
- List of Training College Students who completed training on 31st July 1913, and qualified by examination for recognition as Certificated Teachers, 1913. [List 177.] Price 6d.; by post, 7d.
- List of Persons who have passed the Certificate Examination of the Board of Education for Teachers in Elementary Schools, 1913. [List 165.] Price 6d.; by post, 7d.

Secondary Schools and Pupil-Teacher Centres.

- Regulations for Secondary Schools, from 1st August 1909. England [Cd. 4691]; Wales [Cd. 4692.] Price of either 2d.; by post, 3d.
- Regulations for the Preliminary Education of Elementary School Teachers, 1913. England [Cd. 7003]; Wales [Cd. 7005.] Price of either 2½d.; by post, 3½d.
- List of Elementary Secondary Schools and recognised Pupil-Teacher Centres in England [List 60.] Price 9d.; by post, 11d.
- Building Regulations for Secondary Schools and Pupil-Teacher Centres. [Cd. 3865.] Price 2d.; by post, 2½d.
- Report for 1912 under Welsh Intermediate Education Act. (H.C. 155; 1913.) Price 1½d.; by post, 2d.
- Report of Consultative Committee on Examinations in Secondary Schools, 1911. [Cd. 6004.] Price 2s. 6d.; by post, 2s. 11d.
- Report of Consultative Committee on Practical Work in Secondary Schools. [Cd. 6849.] Price 1s. 9d.; by post, 2s. 1d.
- Curriculum of Secondary Schools. [Circular 826.] Price 2d.; by post 3d.
- Teaching of English in Secondary Schools. [Circular 753.] Price 2d.; by post, 2½d.
- Pronunciation of Latin. [Circular 791 for England; or Wales, Circular 59.] Price of either 1d.; by post, 1½d.
- Teaching of Latin in Secondary Schools. [Circular 574, for England; or Wales, Circular 1.] Price 1d.; by post, 1½d.
- Teaching of History in Secondary Schools. [Circular 599.] Price 1d.; by post, 1½d.
- Teaching of Housecraft; Interim Memorandum. Price 4d.; by post, 5½d.
- Teaching of Modern Languages. [Circular 797.] Price 3d.; by post, 4d.
- Teaching of Needlework. [Circular 719.] Price 1d.; by post, 1½d.
- Memorandum on Physical Training in Secondary Schools. [Circular 779 for England; or Wales, Circular 40.] Price 2d.; by post, 2½d.
- ## Technology, Evening Schools, and Higher Education in Science and Art.
- Regulations for Technical Schools, Schools of Art and other Forms of Provision of Further Education, from 1st August 1913. [Cd. 6925.] Price 2d.; by post, 3d.
- Regulations for Junior Technical Schools. [Cd. 6919.] Price 1d.; by post, 1½d.
- Regulations for University Tutorial Classes. [Cd. 6866.] Price ½d.; by post, 1d.
- Regulations for Schools of Nautical Training. [Cd. 6868.] Price ½d.; by post, 1d.
- Price 3d.; by post, 4½d.
- Regulations for Examinations in Science and Technology, 1914. (Rules 101)
- Regulations for Examinations in Art, 1914. (Rules 110.) Price 2d.; by post, 3d.
- Rules as to Certificates for Teachers of Art. [Rules 109.] Price 1d.; by post 1½d.
- List of (i) Technical Instruction Courses and Day Technical Classes and (ii) Schools of Art and Art Classes, 1911-12 13. [List 111.] Price 3d.; by post, 4d.
- Prospectus of the Royal College of Art, 1913-14. Price 3d.; by post, 4d.

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**REGULATIONS AND SYLLABUSES
FOR EXAMINATIONS IN
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PREFATORY NOTE.

1. These Regulations for the Examinations in Art, 1915, are subject to the alterations described below, substantially identical with those issued by the Board for the Examinations in Art 1914. It is important that candidates desiring to obtain the new Teaching Certificate in Art should read, together with paragraph 7 of these Regulations, Rules 109, where the full requirements for that Certificate are set out.

2. Attention is again called to the announcement in the second part of paragraph 2 (a) that after 1915 no account will be taken of successes obtained under the former Scheme of Art Examinations.

3. After careful consideration of the question whether it would not be possible still further to adapt the Examination in Industrial Design to the special needs and circumstances of industrial students, the Board have decided to treat two of the tests hitherto comprised in this examination as "qualifying tests," and to permit candidates to take these tests separately from the two remaining tests, which will in future constitute the examination proper. This modification of the Regulations is announced in paragraph 2 (b).

4. As regards Appendix II. to these Regulations, the Board wish to repeat, for the information of Managers and Head Masters, that while they are of opinion that it is desirable for Schools of Art to have an available supply of full-sized casts both for the purpose of direct study by the student and also for the special purpose of preparation for a test in Memory Drawing, they will not require any School to have full-sized casts of all statues mentioned in paragraph 6 of Appendix I. as those which candidates for the Board's Examination in Drawing, 1915, will be required to study in preparation for a Memory test. It will, moreover, be observed that the Board have

decided to make no addition to the list of casts mentioned in that paragraph until 1916, when only one figure will be added.

L. A. Selby-Bigge

17 July 1914.

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N.B.—New or substantially modified passages are printed in italics.

BOARD OF EDUCATION.

REGULATIONS FOR EXAMINATIONS IN ART, 1915.

1. In 1915 the Board of Education will hold Examinations in the following subjects :—

- (a) Drawing.
- (b) Painting.
- (c) Modelling.
- (d) Pictorial Design.
- (e) Industrial Design.

The Examinations will be based upon the syllabus published in Appendix I.

2.—(a) The subjects of each Examination will be sub-divided for the purpose of setting tests, but, *except in the case of the Examination in Industrial Design, as indicated below*, candidates must take each Examination as a whole. Marked success in one test will be allowed to compensate for comparative want of success in another. The fact that a candidate has passed under the former scheme of Art Examinations in any section of a subject covered by the Syllabus will not excuse him from entering for all the tests comprised in each Examination; but the success then obtained will, if it is to his advantage, be specially taken into account, and the Board will not credit any candidate with a less measure of achievement in any section of a subject of the new Examinations covered by a previous success than that which he had reached at the time of his earlier Examination.

After 1915 no account will be taken of successes obtained under the former scheme of Art Examinations.

(b) *The Examination in Industrial Design, which will from 1915 onwards be divided into two preliminary qualifying tests and two main tests constituting the Examination proper, will be open—*

- (i) *to candidates who propose to take all four tests in 1915; and*
- (ii) *to candidates who propose only to take the two qualifying tests with a view to taking the two main tests in 1916 or 1917.*

Any work done in the main tests by candidates who do not satisfy the Examiners in the qualifying tests will not be taken into consideration. Candidates who desire to take the main tests in 1918 or any subsequent year must pass the qualifying test

either in that year or in one of the two years immediately preceding.

3.—(a) No candidate will be admitted to the Examination in Drawing in 1915 who will not be over 17 years of age on the 31st July 1915.*

(b) No candidate will be admitted to any of the other Examinations in 1915 who will not be over 19 years of age on the 31st July 1915.*

4. No candidate will be admitted in one year to an Examination in more than one of the subjects mentioned in paragraph 1 of these Regulations.

5. No candidate will be admitted more than thrice to an Examination in the same subject, or to the tests qualifying for admission to the Examination in Industrial Design; and no candidate will be admitted to an Examination in a subject in which he has already passed with distinction.

6. A fee of 10s. will be charged to candidates for admission to each Examination. In the case of the Examination in Industrial Design, half of this fee will be payable at the time of applying for admission to the preliminary qualifying tests, and half at the time of applying for admission to the Examination proper.

7.—(a) Candidates for admission to the Examination in Drawing and, except as indicated in paragraph 2 (b) of these Regulations, to the Examination in Industrial Design, are not required to have passed any previous Examination.

(b) (i) Except as mentioned below, no candidate may attend the Examinations in Painting, Modelling, or Pictorial Design unless he has first passed the Examination in Drawing.

(ii) A candidate who holds the Art Master's Certificate or the Full Associateship of the Royal College of Art may attend the Examinations in Painting, Modelling, or Pictorial Design as supplementary tests affording evidence of specialised attainments.†

(iii) A candidate may attend the Examinations in Painting, Modelling, or Pictorial Design who has obtained a First Class in Drawing from the Antique and a First Class in Drawing from Life under the old system of Art Examinations.‡

* For the purpose of these Regulations a person is considered to complete each year of age immediately on the commencement of a birthday. Thus a person born on July 31st, 1898, is over 17 years of age on July 31st, 1915, and is qualified, therefore, for admission to the Examination in Drawing; but a person born on August 1st, 1898, is not.

† See note (*) on page 6.

‡ First Class successes in Drawing from Life and Drawing from the Antique obtained at the special Art Examinations which were held in February, 1914, may be counted for this purpose.

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- (iv) A candidate may be admitted to the Examination in Modelling if he has obtained a First Class in Drawing from Life, a Second Class in Drawing from the Antique, and a First Class in Modelling from the Antique, or if he has obtained a First Class in Drawing from the Antique, a Second Class in Drawing from Life, and a First Class in either Modelling from Life or Modelling the Head from Life.*
- (v) The Board will be prepared to accept, in lieu of the Examination successes respectively specified above, evidence satisfying them that the candidate has corresponding qualifications equivalent to or higher than those attested by such successes.

8. Candidates desiring to apply for admission to the Examination will be required to make their application through the Managers of the school they attend, if they are students at a school, and upon a prescribed form which should be duly completed and returned to the Board not later than March 1st. Applications for admission to the Examination received after this date may be refused by the Board. If the candidate's application is accepted by the Board he will be so informed, and will in due course be instructed as to the centre at which he will be required to present himself for Examination, and will be furnished with a ticket for admission.

9.—(a) Candidates, in addition to taking the prescribed tests, must by the first day of the Examination have ready for submission as testimonies of study such note-books and sketch-books as they have kept during the two years preceding the Examination, together with not more than two examples of finished work in each of the sub-divisions of the Syllabus which must have been executed by them without assistance during that period. These testimonies of study and works should be work done in the ordinary course of study, and it is not desired that intending candidates should specially prepare specimens of their work for this purpose. But the Board will in this connection raise no objection to the re-submission of works executed within the prescribed period which have already been accepted for the Art Class Teacher's Certificate or the Art Master's Certificate. If a candidate is not prepared to submit works in any particular sub-division of the Syllabus of the Examination he

*A candidate who desires to obtain the new Teaching Certificate in Art to be issued under the provisions set out in Rules 109 must satisfy the conditions specified in those Rules and in particular must pass the Drawing Examination unless he holds the Art Class Teacher's Certificate and has obtained a First Class in Drawing from the Antique and a First Class in Drawing from Life under the old system of Art Examinations, or at the special Art Examinations which were held in February 1914. This condition applies to a candidate for the new Teaching Certificate who already holds the Art Master's Certificate or the Full Associateship of the Royal College of Art.

proposes to take, the reasons should in all cases be stated at the time application is made for admission to the Examination; and if earlier work covering the ground is available, the candidate must be prepared to submit it in substitution.

(b) The Managers presenting a candidate will be required to make arrangements for the collection and transmission of his testimonies of study in accordance with instructions which will be given by the Board.

(c) The records of successful works submitted for the Art Class Teacher's or Art Master's Certificates will be taken into account by the Examiners.

10. Candidates applying for admission to the Board's Examinations will be required to state upon their Application Forms whether they propose to compete for any of the Board's awards in Art, and to state for which of these awards they desire to be registered as competitors.*

11. The Art Examinations will be held on the days and at the hours set out in Appendix III.

12. Successful candidates in each Examination will be classified as having (1) passed the Examination, or (2) passed the Examination with distinction. Certificates of success will be issued and a result list will be published in due course. No prizes will be awarded in connection with the Art Examinations.

The Local Management of Examinations.

13. If Managers desire to present candidates for Examinations, but do not wish to apply for the recognition of their School as an Examination Centre, it will rest with them to make arrangements for the attendance of such candidates with other Managers applying for the recognition of their School as an Examination Centre. In the absence of such arrangements the Board cannot undertake to provide Examinations for the candidates in question.

14.—(a) Applications by Managers of Schools of Art or Art Classes desiring the recognition of their Schools as Centres for the Art Examinations should be made to the Board on the prescribed forms not later than 15th March 1915. Particulars must be given of any arrangements which may have been made with other Managers under the preceding paragraph for the attendance of candidates from their Schools.

(b) There must also be submitted outline plans, drawn to one-eighth of an inch scale, of each floor proposed to be used

* For particulars as to these Awards, reference should be made to the Interim Regulations for Scholarships, Exhibitions, Free Studentships and other Awards in Art, applicable to the year 1915.

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for Examinations, showing the orientation, the floor space of each Examination room, the windows and other means of lighting, including artificial lighting if the room is to be used for Evening Examinations. The connections of the rooms one with another must also be shown.

(e) Examinations may only be held in rooms which are adequately lighted. The rooms should have level floors, should be without galleries, and should accommodate candidates so that they may be seated at written Examinations not less than five feet apart from centre to centre, and should provide such further space as may be required for tests other than written tests.

(d) The Board will in due course inform the Managers whether the application is approved and, if so, for what numbers of candidates at the several Examinations provision will be required.

15. The Managers of the School at which the Art Examinations are held will be regarded as responsible for the proper conduct of the Examinations, and will be called upon to provide models for the tests in which models will be required to pose, and such materials for examination, for example, clay and plaster, as are not supplied by the Board of Education. Particulars as to the material which will be required will be forwarded by the Board to the Managers.

16. For the invigilation of the Examinations the Board recognise (a) Superintendents, and (b) Assistants to the Superintendents. These Invigilators may be either (i) Managers, or (ii) paid Superintendents or Assistants. Candidates for Examination, their relatives, teachers at the School where the Examination is held, or at any School attended by any of the candidates, or other persons having a direct interest in the success of a candidate, are ineligible to act as Invigilators for the Centre at which such candidates are to be examined.

17.—(a) Each examination test held at any centre must be conducted under the supervision of a Superintendent appointed by the Managers for the purpose and acting under their direction.

(b) Where more than one room is used for an examination test, or where the number of candidates under examination in one room is large, or where Examinations are held in L-shaped or T-shaped rooms, the Board may require the appointment of Assistants to take part in the invigilation under the direction of a Superintendent.

18. The name of each Superintendent or Assistant Superintendent must be submitted to the Board for approval by the Managers who propose to appoint him. Persons so nominated for approval must be qualified by their position or occupation to perform the duties of this office satisfactorily.

19. The Managers will be furnished with lists of the candidates whose admission to the Examination at the Centre has been approved by the Board. Admission to the Examination must be refused to all persons whose names have not been thus previously notified to the Managers, and each candidate should as a rule be required to produce for inspection the ticket supplied to him by the Board.

20.—(a) The Board will contribute to the daily expenses of superintending the Drawing, Painting, and Modelling Examinations at a Centre in respect of any days on which the Managers have had to provide for more than three candidates in all in those subjects. Where provision has been made for more than three candidates in all in Painting and Modelling together, the Board will contribute in respect of the last week of the Modelling Examination, even though the number of candidates is three or less.

(b) The Board will contribute to the daily expenses of superintending the Pictorial Design Examination and the Industrial Design Examination *(including the tests qualifying for admission to that Examination)* at a Centre where the Managers have had to provide for more than three candidates in all in those subjects.

(c) Where the above conditions are satisfied the Board's contribution will be one-half the sum paid by the Managers as fees for the necessary* superintendence and assistance in superintendence in the several tests, provided that the contribution will not exceed—

- (i) in respect of the Drawing, Painting, and Modelling Examinations the amount of 6s. per day for each Superintendent and 4s. per day for each Assistant Superintendent;
- (ii) in respect of the Pictorial Design Examination and the Industrial Design Examination *(including the tests qualifying for admission to that Examination)* the amount of 4s. per afternoon or evening or 6s. per day for each Superintendent and 3s. per afternoon or evening or 4s. per day for each Assistant Superintendent.

Issue and Custody of Papers of Questions, &c.

21. The examination material, question papers and instructions for the several tests comprised in the Examinations will be issued by the Board to the person nominated by the Managers for the purpose, who may be a person nominated as a Superintendent. This person will be responsible for the safe

* The number of Superintendents and Assistant Superintendents which the Board will hold to be necessary for the superintendence of the Examinations will be notified to the Managers in due course.

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custody and distribution of the question papers. The packets of examination papers must not in any circumstances be permitted to pass into the hands of any teacher or candidate for examination or of any person interested in the success of a candidate.

22. All possible care is taken to forward the examination papers and instructions required for the several Examinations, but the Board will not be responsible for subsequent loss or miscarriage or for mistakes attributable to candidates, Managers, or Superintendents.

23. Detailed instructions for the conduct and superintendence of Examinations will be issued in due course to Managers and Superintendents of Examinations. It will be the duty of a Superintendent to superintend the Examinations in accordance with these instructions and to forward the worked exercises as directed by the Board.

24.—(a) The Board, after such investigation as they think necessary, may cancel the Examination of all or any of the candidates, in cases where there is evidence of fraud or where there has been such breach of the instructions as in their opinion is sufficiently serious to invalidate the Examination, or, alternatively, may call upon all or any of the candidates to be re-examined. If any candidate should fail to appear at an investigation or decline to be re-examined the Board may cancel his Examination.

(b) The Board may make it a condition of the granting of any special Examination or test, in the event of the failure of an Examination through no fault of the Board, that the whole cost of such special Examination shall be met locally.

APPENDIX I.

NOTE.—New or substantially modified passages are printed in italics.

ART EXAMINATION SYLLABUSES.

SYLLABUS OF EXAMINATION IN DRAWING.

1. Candidates, in addition to taking the prescribed tests, must be prepared to submit, if required to do so, as testimonies of study, such note-books and sketch-books as they have kept during the two years preceeding the Examination, together with not more than two examples of finished work in each of the subdivisions of the Syllabus, which must have been executed by them without assistance during that period.

2. The Examination in Drawing comprises the six tests set out below. The candidates must in all cases take the Examination as a whole, but marked success in one test may be allowed to compensate for comparative want of success in another. If a candidate has passed, under the former scheme of Art Examinations in any subjects covered by the Syllabus, the success then obtained will, if it is to his advantage, be fully taken into account; but the fact that a candidate has previously passed in subjects corresponding to any of the present tests will not excuse him from entering for all the six tests comprised in the Examination in Drawing.

3. The tests will mainly take the form of exercises to be worked by the candidates, but candidates will be required to express themselves clearly in written answers to questions on Anatomy.

(i) DRAWING FROM THE ANTIQUE.

4. Candidates will be required to make a drawing from a cast to be prescribed by the Examiners.

Drawings must be executed with the point, in either black chalk, carbon pencil or black lead pencil, upon a half imperial sheet of paper, and must be at least 15 and not more than 18 inches in height.

Four hours will be allowed.

(ii) DRAWING FROM LIFE.

5. Candidates will be required to make two drawings, (a) a direct drawing from a nude figure, and (b) a memory drawing of the same figure. Both drawings must be executed with the point in either black chalk, carbon pencil, or black lead pencil.

The model must be posed according to the instructions of the Examiners. The direct drawing should, as far as possible, fill a half imperial sheet of paper, whether the model be posed standing, seated, reclining, or otherwise. When these drawings have been collected and the model has been dismissed from the room, candidates will, after an interval of one hour, be required to make a drawing from memory of the view of the figure which they have just drawn. This drawing, upon a half imperial sheet of paper, should be about 15 inches high.

Five hours will be allowed—three for drawing from the model, one hour for an interval, and one hour for drawing from memory.

(iii) DRAWING FROM MEMORY.

6. Candidates will be required to draw from memory:—

(a) Any two or more of the figures in the following list which may be selected by the Examiners:—

- Belvedere Torso.
- Venus of Milo.
- Upright Discobolus.
- Boy and Goose.
- Lorenzo de' Medici (Michael Angelo).
- PISSIS.
- David (Donatello).

[N.B.—No additions to this list will be made in 1915. The Hygeia will, however, be added in 1916. For the purposes of study in preparation for this test reduced casts may be used if desired.]

The drawings must be about 9 inches in height, and must be executed with the point in either black chalk, carbon pencil, or black lead pencil.

(b) A familiar object of Natural History, such as a bird, an animal, a fish, to be selected by each candidate from a list made by the Examiners.

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- (c) A human figure in an action specified by the Examiners, to emphasise which drapery may be added by the candidate.

Four hours will be allowed.

(iv) ANATOMY.

7. Candidates will be required, by means of written and illustrated answers to questions, to display a knowledge of the details of anatomy so far as they have an influence on man's external form in action and repose. This will entail a general acquaintance with the skeleton and the disposition of its parts, more particularly the bones and joints of the limbs, the superficial soft parts, and the form and arrangement of the muscles which influence the surface contours.

Candidates will also be expected to exhibit a knowledge of the variations in form and proportion dependent upon growth and sex, and to be familiar with the main principles involved in the maintenance of the erect posture.

Candidates will be required to show proof of their ability to apply their knowledge of anatomy in analysing and drawing the figure by illustrating their answers as fully as possible with good sketches, for which higher credit will be given than for elaborately written descriptions.

Candidates will also have the option of making a drawing of a figure in action, in which the main features in its construction as regards bone and muscle must be clearly displayed.

Two hours and a half will be allowed.

(v) PERSPECTIVE.

8. Candidates will be required to work two exercises.

(a) This exercise will require the drawing in perspective, with instruments, from plan and elevation, of one or two simple solids having plane or curved surfaces, with the chief lines horizontal and vertical, and having one line or surface upon the ground plane. The plan may show the object or objects in relation to vertical surfaces such as two walls of an interior.

The problem will be such as can be solved by means of lines in horizontal planes.

Candidates are expected to have a knowledge of the direct method employed by architects, and it may be required that the problem shall be worked in this method. There may also be required the drawing of the reflections of the solids in a plane horizontal mirror, or the drawing of the shadows of them when cast by the sun or by an artificial light within the picture upon horizontal or vertical surfaces, or upon surfaces of single curvature.

(b) This exercise will consist of sketching a view of a building from a plan and elevations. The subject may deal with the interior or exterior. The candidate may at his discretion introduce figures or other appropriate accessories.

The student must show, in a well-drawn rendering, his knowledge of the laws of perspective governing the main construction of the subject.

In the diagrams accompanying the paper of questions the following letters will represent the terms applied to the various points, lines, &c., used in working out the perspective scheme, viz. :—

- | | |
|------|--|
| H.L. | Horizon Line. |
| C.V. | Centre of Vision. The point on the picture plane directly opposite to the eye of the spectator. |
| E. | Eye. The point showing the position of the eye of the spectator and its perpendicular distance from the picture plane. |
| G.P. | Ground Plane. |
| G.L. | Ground Line. The intersection of the ground plane with the picture plane. |

- I.L. Intersection Line. The line in which a plane, other than the ground plane, intersects the picture plane.
- P.P. Picture Plane.
- P.D. Point of Distance.
- V.P. Vanishing Points of Lines.
- V.L. Vanishing Lines of Planes.
- C.V.L. Centre of Vanishing Line.
- M.P. Measuring Point.
- S. The Sun.
- V.P.S.R. Vanishing Point of the Sun's Rays. The point to which, when the sun is behind the spectator, the parallel lines representing the sun's rays appear to vanish.
- V.L.P.S. Vanishing Line of the Plane of Shade. The V.L. of the plane passing through the S. or V.P.S.R. and containing the line throwing the shadow.
- L. Source of Artificial Light.
- R.S. Reflecting Surface.
- Three hours will be allowed.

(vi) ARCHITECTURAL DRAWING.

9. Candidates will be required—

- (a) to draw from memory to a large scale in accordance with the Doric, Ionic, or Corinthian order (in its Greek, Roman, or Renaissance form at the option of the candidate) an entablature with the capital and with or without the column. The height of the column will be given ;
- (b) to set out to scale the plan, sections and elevations of a building, of which the particulars and dimensions will be supplied by the Examiners, such as the dimensions and shape of the building, the numbers and positions of the openings, the thickness of the walls, and the block sections of the roof.*

Four hours will be allowed.

SYLLABUS OF EXAMINATION IN PAINTING.

10. Candidates, in addition to taking the prescribed tests, must be prepared to submit, if required to do so, as testimonies of study, such note-books and sketch-books as they have kept during the two years preceding the Examination, together with not more than two examples of finished work in each of the subdivisions (i), (ii), (iii) and (iv) of the Syllabus, which must have been executed by them without assistance during that period.

11. The Examination in Painting comprises the five tests set out below. The candidates must in all cases take the Examination as a whole, but marked success in one test may be allowed to compensate for a comparative want of success in another. If a candidate has passed, under the former scheme of Art Examinations, in any subjects covered by the Syllabus, the success then obtained will, if it is to his advantage, be fully taken into account ; but the fact that a candidate has previously passed

* This test is one in Architectural Drawing only, and candidates will not be required to show any knowledge of what is ordinarily called Building Construction, or of Architectural Design.

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in subjects corresponding to any of the present tests will not excuse him from entering for all the five tests comprised in the Examination in Painting.

12. The tests will mainly take the form of exercises to be worked by the candidates, but candidates will be required in their written work to show evidence of reading in relation to their study and of some power to express themselves in writing.

(i) **DRAWING FROM LIFE.**

13. Candidates will be required to make, upon a half imperial sheet of paper, a drawing of a nude figure, which must be executed with the point in either black chalk, carbon pencil, or black lead pencil.

The model must be posed according to the instructions of the Examiners. The drawing should, as far as possible, fill the paper, whether the model be posed standing, sitting, reclining, or otherwise.

Four hours will be allowed.

(ii) **PAINTING FROM LIFE.**

14. Candidates will be required to execute a painting from the nude figure, which may be painted at their discretion either in oil colour, water colour, or tempera.

The model must be posed against a plain tone background according to the instructions of the Examiners.

The size of the canvas for oil colour and for tempera will be 36 inches by 28 inches; that of the paper for water colour 22 inches by 15 inches.

Thirty hours, exclusive of intervals for rest, will be allowed.

(iii) **PAINTING FROM STILL LIFE, THE ANTIQUE, OR DRAPERY.**

15. Candidates will be required to paint, as may be prescribed by the Examiners, either (a) a group of still life objects, such as a wineglass, a loaf, oranges, apples, a brass candlestick, a scarf, &c., selected by the Examiners and arranged by the candidate against a simple background; or (b) some white drapery arranged by the candidate on a lay figure or a cast against a plain tone background; or (c) a torso or some other fragmentary antique figure, such as the Belvedere Torso, the Theseus, the Ilissus, &c. Credit will be given, in the case of (a) or (b), for good arrangement by the candidate.

The painting may be in oil colour, water colour, or tempera, at the discretion of the candidates. The size of the canvas or paper to be used will be prescribed by the Examiners.

Twenty hours, exclusive of intervals for rest, will be allowed.

(iv) **FIGURE COMPOSITION.**

16. Candidates will be required to invent and paint in oil colour, water colour, tempera, or in fresco, at their discretion, a composition of figures suitable for a panel, an over-door, a lunette, a spandril, or the like. The subject of the composition and the architectural conditions to which it is to be related will be prescribed by the Examiners. Each candidate must also make a sketch showing the composition on the wall for which it is designed, and indicating the general colour scheme of the room or other surroundings in which it is placed.

The size of the canvas, paper, or wooden backing for fresco to be used will be prescribed by the Examiners.

Thirty hours, exclusive of intervals for rest, will be allowed.

(v) HISTORY AND METHODS OF PAINTING.

17. Candidates will be required to answer questions on—

- (a) The History of Painting, ancient and modern.
- (b) The Methods of Painting, including both traditional and modern processes.

Four hours will be allowed.

SYLLABUS OF EXAMINATION IN MODELLING.

18. Candidates in addition to taking the prescribed tests, must be prepared to submit, if required to do so, as testimonies of study, such note-books and sketch-books as they have kept during the two years preceding the Examination, together with not more than two examples of finished work in each of the subdivisions (i), (ii), (iii), and (iv) of the Syllabus, which must have been executed by them without assistance during that period.

19. The Examination in Modelling comprises the *five* tests set out below. The candidate must in all cases take the Examination as a whole, but marked success in one test may be allowed to compensate for a comparative want of success in another. If a candidate has passed, under the former scheme of Art Examinations, in any subjects covered by the Syllabus, the success then obtained will, if it is to his advantage, be fully taken into account; but the fact that the candidate has previously passed in subjects corresponding to any of the present tests will not excuse him from entering for all the *five* tests comprised in the Examination in Modelling.

20. The tests will mainly take the form of exercises to be worked by the candidates, but candidates will be required in their written work to show evidence of reading in relation to their study and of some power to express themselves in writing.

21. In each of the following tests, with the exception of Modelling Hand and Wrist, etc., the models may be cast either by the candidate, or by a professional moulder, or by some other person skilled in casting.*

22. The models should be covered with plaster—the first stage of the casting process—as soon as possible after the expiration of the time allowed for the tests.

(i) MODELLING FROM LIFE.

23. Candidates will be required to model from the life a nude figure in the round, to be not less than 2 feet in height, exclusive of the base.

The figure must be posed according to the instructions of the Examiners.

Forty-two hours, exclusive of intervals for rest, will be allowed.

(ii) MODELLING HAND AND WRIST, ETC.

24. Candidates will be required to model from the life a full-size model in the round *either* of a hand and wrist, *or* of a foot and ankle, posed upon a slab.

Each candidate must cast his model without assistance.

Twelve hours, exclusive of intervals for rest, will be allowed for the modelling, and six additional hours, exclusive of intervals for rest, for the casting.

* If the candidate elects to cast his own works (other than the model of Hand and Wrist, etc.) he may receive assistance, provided that the Board have previously approved any arrangements proposed for the purpose. Any assistance that may be afforded to the candidate in casting his models, however, must not be given by a teacher of Modelling.

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(iii) **FIGURE COMPOSITION.**

25. Candidates will be required to invent and model a composition of figures for a lunette, a panel, a spandril, a pediment, &c., together with the architectural features, including mouldings or other settings, necessary to complete a harmonious design. The subject of the composition and the architectural conditions to which it is to be related will be prescribed by the Examiners.

Twenty-four hours, exclusive of intervals for rest, will be allowed.

(iv) **MODELLING DESIGN.**

26. Candidates will be required to model an original design, without the use of the human figure, on a subject prescribed by the Examiners. The design must be practically adapted to reproduction according to some recognised process, such as woodcarving, stonecarving, metal forging, metal casting, pottery, or the like. Each candidate will be required, at the time of applying for permission to enter for the Examination, to name the process in relation to which he desires to be tested.

Seven hours, exclusive of intervals for rest, will be allowed.

(v) **HISTORY AND METHODS OF SCULPTURE.**

27. Candidates will be required to answer questions on—

- (a) The History of Sculpture, ancient and modern,
- (b) The methods of Sculpture, Carving, and Modelling, including both traditional and modern processes.

Two papers, occupying three hours each, will be set.

SYLLABUS OF EXAMINATION IN PICTORIAL DESIGN.

28. Candidates, in addition to taking the prescribed tests, must be prepared to submit, if required to do so, as testimonies of study, such note-books and sketch-books as they have kept during the two years preceding the Examination, together with not more than two examples of finished work in each of the sub-divisions (i), (ii) and (iii) of the Syllabus, which must have been executed by them without assistance during that period.

29. The Examination in Pictorial Design comprises the four tests set out below. The candidates must in all cases take the Examination as a whole, but marked success in one test may be allowed to compensate for comparative want of success in another. If a candidate has passed, under the former scheme of Art Examinations, in any subjects covered by the Syllabus, the success then obtained will, if it is to his advantage, be fully taken into account; but the fact that the candidate has previously passed in subjects corresponding to any of the present tests will not excuse him from entering for all the four tests comprised in the Examination in Pictorial Design.

30. The tests will mainly take the form of exercises to be worked by the candidates, but candidates will be required in their written work to show evidence of reading in relation to their study and of some power to express themselves in writing.

(i) **PRELIMINARY KNOWLEDGE.**

31. Candidates will be required to work exercises and answer questions showing knowledge of—

- (a) The principles of Design (such as Light and Shade, Colour and Composition, including space-filling) in relation to their special process and its history;
- (b) The enlargement and reduction of designs according to scale;

- (c) Subsidiary matters, such as lettering (including Roman and its developments, Gothic, &c., capitals, lower-case, and numerals), costume, English heraldry, and the like.

Six hours will be allowed.

(ii) FIGURE COMPOSITION.

32. Candidates will be required to invent and execute a Pictorial Composition on a subject prescribed by the Examiners, suitable at the discretion of the candidates either for a book illustration, or for a poster. The dominant feature of the composition must be the human figure, though animal forms or monsters may be introduced.

A composition for a book illustration should be drawn of a size suitable to an octavo or quarto page. If the design is in black and white, it should be drawn preferably in pen and ink, though water-colour monochrome appropriate to purposes of reproduction may be used. If the design is in colour it must be in water-colour and of a kind suitable to reproduction by some ordinary colour process.

A composition for a poster may be of any proportions that can be contained on an imperial sheet of paper, the scale to which the drawing is made being stated; and may be executed either in black-and-white or in colour.

Six hours, exclusive of intervals for rest, will be allowed.

(iii) ORIGINAL DESIGN.

33. Candidates will be required to make an original design, without the use of the human figure, on a decorative motive prescribed by the Examiners. The design must be practically adapted to reproduction according to some recognised process, such as Engraving in metal or wood, Etching, Wood-cutting, Lithography, Colour-Printing, or a photographic process to be specified by the candidate. Each candidate will be required, at the time of applying for permission to enter for the Examination, to name the process in relation to which he desires to be tested. The design may be made in pen and ink, pencil, chalk, charcoal, or water-colour, at the discretion of the candidate, upon a half imperial sheet of paper.

Six hours, exclusive of intervals for rest, will be allowed.

(iv) HISTORY AND METHODS OF ENGRAVING AND OTHER PROCESSES OF ARTISTIC REPRODUCTION.

34. Candidates will be required to answer questions on the History and Methods of Engraving and other processes of artistic reproduction.

Three hours will be allowed.

SYLLABUS OF EXAMINATION IN INDUSTRIAL DESIGN.

35. Each candidate will be required to name, at the time of applying for permission to enter for the Examination, or for the preliminary tests qualifying for admission to the Examination, a craft in relation to which he desires to be examined. The crafts must be selected from the following list, in which letters are placed in brackets after the names of the crafts to indicate whether they are regarded as crafts which involve respectively

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modelling (M.), a knowledge of architecture (A.), and the use of the figure (F.):—

LIST OF CRAFTS.

Iron Work (M. A.).
Lead Work (M. A.).
Light Metal Work (M. A. F.).
Gold and Silver Smithing (M. A. F.).
Jewellery (M. F.).
Enamelling (F.).
Die Sinking (M. F.).
Stone Carving (M. A. F.).
Plastering (M. A. F.).
Painting and Decorating (A.).
Wall-paper Manufacture (A.).
Mosaic (A. F.).
Glass Painting or Stained Glass (A. F.).
Wood Carving (M. A. F.).
Cabinet Work (A.).
Wood Inlaying (A.).

Pottery (M. F.).
Tile Painting and Modelling (M. F.).
Glass Blowing (M.).
Tapestry (A. F.).
Embroidery (F.).
Dress Design.
Lace Making.
Carpet Weaving.
Linen Weaving.
Cotton Weaving.
Silk Weaving.
Wool Weaving.
Cotton Printing.
Typography.
Illumination (A. F.).
Book Binding.
Linoleum Manufacture.

36. Candidates, in addition to taking the prescribed tests, must be prepared to submit as *testimonies of study*—

In connection with the preliminary tests qualifying for admission to the Examination—

- (a) Such note-books and sketch-books as they have kept during the two years preceding the Examination;
- (b) If their craft involves modelling, one completed drawing from a cast of Historic Ornament and one example of completed modelling from such a cast, and if their craft does not involve modelling, two completed drawings from casts of Historic Ornament only;
- (c) Evidence that they have followed a course of study appropriate to their craft, which must have included, in the case of crafts involving modelling, *Modelling from the Antique*; in the case of crafts not involving modelling, *Drawing from the Antique* and *Drawing from Memory of Natural Objects*; and also, in the case of crafts involving a knowledge of architecture, *Architectural Drawing*; and—

In connection with the Examination proper—

- (d) Such note-books and sketch-books as they have kept during the two years preceding the Examination;
- (e) At least one complete product of their craft produced as well as designed by them, or, where the conditions of manufacture render this impossible, full working drawings or models prepared by them for such a product;*
- (f) Evidence in the form of actual drawings that they have studied and drawn good historic examples of their craft.

All work submitted under (b), (e), and (f) must have been executed by candidates without assistance other than in the form of criticism during the two years preceding the Examination.

In considering work from the Antique, importance will be attached to accuracy of copying, and to careful study of details, such as hands and feet.

* In the subject of *Dress Design*, candidates may submit as a product of their craft a model such as could be displayed upon a full-sized mannequin. The model need not be a finished one, but must be carried to such a stage that its final effect can be clearly and readily judged.

It will not be necessary for candidates who have already passed the Board's new Examinations in Drawing or in Modelling to submit testimonies of study in branches of work covered by those Examinations.

37. The Examination in Industrial Design comprises, in addition to the Examination proper, which consists of two tests, two preliminary qualifying tests. Candidates may take the preliminary qualifying tests and the Examination proper in different years, but no candidate may take the Examination proper unless he either has previously satisfied the Examiners in the preliminary qualifying tests or takes both the qualifying tests and the Examination proper at the same time.* Marked success in one test may be allowed to compensate for a comparative want of success in another. If a candidate has passed, under the former scheme of Art Examinations, in any subjects covered by the following Syllabuses, the success then obtained will, if it is to his advantage, be fully taken into account; but the fact that a candidate has previously passed in subjects corresponding to any of the present tests will not excuse him from entering for both the tests comprised in the Examination in Industrial Design as well as for the qualifying tests.

38. The tests will mainly take the form of exercises to be worked by the candidates, but candidates will be required in their written work to show evidence of reading in relation to their study and of some power to express themselves in writing.

Preliminary Qualifying Tests.

(i) DRAWING OR MODELLING FROM HISTORIC ORNAMENT.

39.—(a) Candidates whose crafts do not involve modelling will be required to make a shaded drawing, upon a half imperial sheet of paper, from a cast of an architectural feature involving ornamental detail.

The drawing may be in either pencil, chalk, pen-and-ink, or wash in water-colour, and must not be of the same size as the example selected for copying.

No ruling, measuring, or use of instruments is allowed.

Three hours will be allowed.

(b) Candidates whose crafts involve modelling will be required to model either from a cast of an architectural feature involving ornamental detail, or from some other example selected by the Examiner as being more appropriate for the particular crafts in relation to which candidates have applied to be examined.

This model must be cast by the candidate without assistance.

Six hours, exclusive of intervals for rest, will be allowed for the modelling, and six additional hours, exclusive of intervals for rest, for the casting.

(ii) PRELIMINARY KNOWLEDGE.

40. All candidates will be required to work exercises and answer questions showing knowledge of—

- the principles of Design (such as the relation of Material to Design, Light and Shade, Colour, and Composition, including space-filling) in relation to their special craft and its history;
- the enlargement and reduction of designs according to scale, the preparation of working drawings, and the ordinary materials, tools, machinery, processes and measurements of their craft;
- subsidiary matters, such as lettering (including Roman and its developments, Gothic, &c, capitals, lower-case, and numerals), costume, English heraldry, and the like.

Six hours will be allowed.

* See paragraph 2 (b) of these Regulations.

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Examination in Industrial Design.

(iii) ORIGINAL DESIGN.

41. Candidates will be required to make an original design on a motive and for a purpose prescribed by the Examiners. The design must be practically adapted to production by the selected craft. The use of the figure may be required, if the craft is one involving that use. The style of the design will be entirely at the candidate's choice, and may be based upon some historic style, or upon natural foliage, or otherwise. If the craft is one involving modelling, *the Examiners may require the design to be modelled.* Candidates will be required to give a rough estimate of the cost of carrying out their designs, or, where this is not practicable, to show some knowledge of the factors determining the cost.

Eight hours, exclusive of intervals for rest, will be allowed.

(iv) HISTORY AND STYLES OF ORNAMENT.

42. All candidates will be required to answer questions on the History and Styles of Ornament, with special reference to the relation of ornament to the industrial arts. *Those who select for the purpose of the Examination crafts marked A. in the list of crafts given in para. 35 will also be required to answer questions on the relation of ornament to architecture.* Candidates must show correct knowledge of the current nomenclature of ornament and of the various kinds of pattern.

Three hours will be allowed.

APPENDIX II.

LISTS OF STATUES SUITABLE FOR STUDY IN
SCHOOLS OF ART.

CLASSICAL.

- Vaison Athlete (Vaison Diadumenos). (British Museum. Marble. Height, 6 ft. 8 ins.)
 Marsyas. (British Museum. Bronze. Height, 2 ft. 8 ins.)
 Boy extracting Thorn. (Palazzo de' Conservatori, Rome. Bronze. Height, 2 ft. 7½ ins.)
 Boy and Goose (Museo Capitolino, Rome. Marble. Height, 3 ft. 3 ins.)
 Clapping Faun. (Museo Nazionale, Florence. Marble. Height, 4 ft. 10 ins.)
 Faun. (Naples Museum. Bronze. Height, 2 ft. 5½ ins.)
 Narcissus. (Naples Museum. Bronze. Height, 2 ft. 11 ins.)
 Seated Hermes. (Naples Museum. Bronze. Bronze Cast in British Museum. Height, 4 ft.)
 Ilissus, from the Parthenon. (British Museum. Marble. Height, 2 ft. 8 ins. Width, 6 ft. 2½ ins.)
 Reclining Theseus, from the East Pediment of the Parthenon. (British Museum. Marble. Height, 4 ft. 2½ ins. Width, 5 ft. 7 ins.)
 Richmond Torso of Venus. (British Museum. Marble. Height, 2 ft. 8 ins.)
 Belvedere Torso. (Vatican, Rome. Marble. Height, 3 ft. 10 ins.)
 Athlete with Strigil, also called the Apoxyomenos of the Braccio Nuovo. (Vatican, Rome. Marble. Height, 6 ft. 10 ins.)
 Venus of Milo. (Louvre, Paris. Marble. Height, 6 ft. 11½ ins.)
 Upright Discobolus. (Vatican. Marble. Height, 5 ft. 9½ ins.)

- Hermes of Praxiteles. (Olympia. Marble. Height, 7 ft. 6½ ins.)
 Farnese Hermes. (British Museum. Marble. Height, 6 ft. 11 ins.)
 The Lizard Slayer or Sauroctonus. (Vatican, Rome. Marble. Height, 5 ft. 6 ins.)
 Satyr with Dionysus. (Louvre, Paris. Marble. Height, 6 ft. 2 ins.)
 Esquiline Venus. (Palazzo de' Conservatori, Rome. Marble. Height, 5 ft. 2 ins.)
 Victory of Samothrace. (Louvre, Paris. Marble. Height, 7 ft. 7½ ins.)
 Hypnos. (Madrid. Marble. Height, 4 ft. 11 ins.)

DONATELLO.

- David. (Museo Nazionale, Florence. Bronze. Height, 5 ft. 4 ins.)

MICHAEL ANGELO.

- The Slave. (Louvre, Paris. Marble. No. 379 in Louvre Catalogue. Height, 7 ft.)
 Lorenzo de' Medici, called Il Pensieroso. (Medici Chapel, S. Lorenzo, Florence. Marble. Height, 5 ft. 11 ins.)
 Night. (Medici Chapel, S. Lorenzo, Florence. Marble.)
 Cupid. (Victoria and Albert Museum. Marble. Height, 3 ft. 5½ ins.)
 Bacchus. (Museo Nazionale, Florence. Marble. Height, 6 ft. 11 ins.)

SANSOVINO.

- Bacchus. (Museo Nazionale, Florence. Marble. Height, 4 ft. 9 ins.)

GIOVANNI DA BOLOGNA AND HIS SCHOOL.

- Mercury. (Museo Nazionale, Florence. Bronze. Height, 6 ft. 3½ ins.)
 Venus. (Boboli Gardens, Florence. Marble. Height, 4 ft. 4 ins.)

EDME BOUCHARDON.

- L'amour taillant un arc. (Louvre, Paris. Marble. Height, 5 ft. 7 ins.)

A. HOUDON.

- Diana. (Hermitage, St. Petersburg. Bronze. Replica in Louvre, Paris. Height, 6 ft. 9 ins.)

J. B. PIGALLE.

- Mercury. (Kaiser Friedrich Museum, Berlin. Marble. Reduced Replica in Louvre, Paris. Height, 6 ft.)

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APPENDIX III.

TIME TABLES OF EXAMINATIONS.

EXAMINATION IN DRAWING.

<i>Drawing from the Antique.</i>	Monday, 31 May	- 10.30 a.m. to 1.30 p.m., 2.30 p.m. to 3.30 p.m.
<i>Anatomy</i> - - -	" "	- 4 p.m. to 6.30 p.m.
<i>Drawing from Life</i> -	Tuesday, 1 June	- 10.30 a.m. to 1.30 p.m., 2.30 p.m. to 3.30 p.m.
<i>Perspective</i> - -	Wednesday, 2 June	- 10.30 a.m. to 1.30 p.m.
<i>Drawing from Memory</i>	" "	- 2.30 p.m. to 6.30 p.m.
<i>Architectural Drawing</i>	Thursday, 3 June	- 10.30 a.m. to 2.30 p.m.

EXAMINATION IN PAINTING.

<i>Drawing from Life</i> -	Monday, 31 May	- 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 3.30 p.m.
<i>History and Methods of Painting.</i>	Tuesday, 1 June	- 10.30 a.m. to 2.30 p.m.
<i>Painting from Still Life, Antique or Drapery.</i>	Wednesday, 2 June, to Friday, 4 June, and Saturday, 5 June	- 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5.30 p.m. each day. - 10.30 a.m. to 12.30 p.m.
<i>Painting from Life</i> -	Monday, 7 June, to Wednesday, 9 June (inclusive), and Friday, 11 June, to Monday, 14 June (inclusive).	- 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 4.30 p.m. each day.
<i>Figure Composition</i> -	Tuesday, 15 June, to Saturday, 19 June (inclusive).	- 10.30 a.m. to 1.30 p.m., 2.30 p.m. to 5.30 p.m. each day.

EXAMINATION IN MODELLING.

<i>History of Sculpture</i> -	Monday, 31 May	- 10.30 a.m. to 1.30 p.m.
<i>Methods of Sculpture</i> -	" "	- 2.30 p.m. to 5.30 p.m.
<i>Modelling Hand and Wrist, etc.</i>	Tuesday, 1 June, and Wednesday, 2 June.	- 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5.30 p.m. each day.
<i>For Candidates to Cast Models of Hand and Wrist, etc.</i>	Thursday, 3 June	- 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5.30 p.m.
<i>Modelling from Life</i> -	Monday, 7 June, to Monday, 14 June, (inclusive).	- 10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5.30 p.m. each day.
<i>Casting</i> - -	Wednesday, 16 June, to Friday, 18 June, (inclusive)	- 10 a.m. to 1.30 p.m., and 2.30 p.m. to 6.30 p.m. each day.

<i>Modelling Design</i>	- Saturday, 19 June	- 10.30 a.m. to 1.30 p.m., 2.30 p.m. to 5 p.m., and 5.30 p.m. to 7 p.m.
<i>Casting</i>	- Monday, 21 June, and Tuesday, 22 June.	10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5.30 p.m. each day.
<i>Figure Composition</i>	- Wednesday, 23 June, to Saturday, 26 June (inclusive).	10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5.30 p.m. each day.
<i>Casting</i>	- Monday, 28 June, to Thursday, 1 July (inclusive).	10.30 a.m. to 1.30 p.m., and 2.30 p.m. to 5.30 p.m. each day.

(See the Note as to Casting on page 24.)

EXAMINATION IN PICTORIAL DESIGN.

<i>Preliminary Knowledge</i>	Monday, 31 May, and Tuesday, 1 June.	7 p.m. to 10 p.m. each evening.
<i>Figure Composition</i>	- Wednesday, 2 June and Thursday, 3 June.	7 p.m. to 10 p.m. each evening.
<i>History and Methods of Engraving.</i>	Friday, 4 June	- 7 p.m. to 10 p.m.
<i>Original Design</i>	- Tuesday, 8 June, and Wednesday, 9 June.	7 p.m. to 10 p.m. each evening.

EXAMINATION IN INDUSTRIAL DESIGN.

<i>Preliminary Knowledge</i>	Monday, 31 May, and Tuesday, 1 June.	7 p.m. to 10 p.m. each evening.
<i>*Drawing from Historic Ornament.</i>	Wednesday, 2 June	- 7 p.m. to 10 p.m.
<i>†Modelling from Historic Ornament.</i>	Wednesday, 2 June, and Thursday, 3 June.	7 p.m. to 10 p.m. each evening.
<i>History and Styles of Ornament.</i>	Friday, 4 June	- 7 p.m. to 10 p.m.
<i>For Candidates to cast their Models from Historic Ornament.</i>	Saturday, 5 June	- 2 p.m. to 10 p.m.
<i>Original Design</i>	- Tuesday, 8 June, Wednesday, 9 June, and Thursday, 10 June	7 p.m. to 10 p.m. each evening.
<i>†Casting Original Designs.</i>	Saturday, 12 June	- 2 p.m. to 10 p.m.

(See the Note as to Casting on page 24.)

* To be taken by candidates who select crafts which do not involve modelling, viz., Enamelling, painting and decorating, wall-paper manufacture, mosaic, glass painting or stained glass, cabinet work, wood inlaying, tapestry, embroidery, dress design, lace-making, carpet weaving, linen weaving, silk weaving, wool weaving, cotton weaving, cotton printing, typography, illumination, book-binding, linoleum manufacture.

† To be taken by candidates who select crafts which involve modelling, viz., Iron work, lead work, light metal work, gold and silver smithing, jewellery, die sinking, stone carving, plastering, wood carving, pottery, tile painting and modelling, glass blowing.

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Note as to Casting.

N.B.—(i) The candidate is required to cast his own exercise in two cases only, viz., Modelling the Hand and Wrist, etc. (Modelling Examination), and Modelling from Historic Ornament (Industrial Design Examination).

(ii) In other cases models may be cast either by the candidate, with or without assistance, or by a professional moulder or other person skilled in casting. (See paragraph 21 of the Art Examination Syllabuses, in Appendix I.)

(iii) All casting, whether by the candidate or by any other person, must be done at the Examination Centre under superintendence within the hours respectively indicated in the Time Tables.

FOR OFFICIAL USE.
BOARD OF EDUCATION.

INTERIM REGULATIONS FOR SCHOLAR-
SHIPS, EXHIBITIONS, FREE STUDENT-
SHIPS AND OTHER AWARDS IN ART,
APPLICABLE TO THE YEAR 1914.

CONTINUED FOR 1915.



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PREFATORY NOTE.

The Board of Education intend to formulate with the assistance of the Standing Committee of Advice for Education in Art a revised scheme of awards in Art adapted to the new system of Examinations in Art which became operative in 1913. Pending the completion of this scheme, it is necessary to make provision for the continuance of the awards of Royal Exhibitions, National Scholarships, Free Studentships, and Local Scholarships, with only such changes in the existing conditions as are necessary in order to enable the competitions to be held on the basis of the Examinations available in 1914. The present Regulations which follow without substantial alteration the Interim Regulations for 1913, are intended to effect this temporary object, and will not necessarily be operative after 1914.

The conditions of award of Local Exhibitions in Art will in 1914, as heretofore, be determined by the Local Education Authority or other Managers of the local fund, subject to the approval of the Board. The Board desire, however, to give notice that new Exhibitions of this type awarded after 1914 may not be eligible for aid from them, unless provision is made for this kind of award in the scheme now under consideration.

L. A. Selby-Bigge

September 18th, 1913.

BOARD OF EDUCATION.

Interim Regulations for Scholarships, Exhibitions, Free Studentships and other Awards in Art, applicable to the Year 1914.

NOTE.—*New or substantially altered passages are indicated in italics.*

CHAPTER I.

ROYAL EXHIBITIONS, NATIONAL SCHOLARSHIPS, FREE STUDENTSHIPS AND LOCAL SCHOLARSHIPS, 1914.

Number and Nature of Awards.

1. The Board propose, if there are candidates of sufficient merit, to make the following awards in Art in the year 1914:—

- (a) 10 Royal Exhibitions, 6 National Scholarships, and not less than 15 Free Studentships, tenable at the Royal College of Art;
- (b) 24 Local Scholarships tenable at Schools of Art recognised by the Board.

2. A Royal Exhibition entitles the holder to an allowance of 60*l.* a year for three years and to free admission to lectures and instruction in the Royal College of Art approved for the Exhibitioner.

3. A National Scholarship entitles the holder to an allowance of 60*l.* a year for three years and to free admission to lectures and one or more of the technical classes and instruction in one of the Schools of the Royal College of Art, *i.e.*, (1) Architecture, (2) Ornament and Design, (3) Decorative Painting, (4) Sculpture and Modelling, with such other supplementary instruction as may be approved for the Scholar.

4. A Free Studentship entitles the holder to free admission for two years to the lectures and instruction in one of the Schools of the Royal College of Art; *i.e.*, (1) Architecture, (2) Ornament and Design, (3) Decorative Painting, (4) Sculpture and Modelling, with such other

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supplementary instruction as may be approved for the Student.

5. A Royal Exhibitioner or a National Scholar is allowed railway fare (third class) between his home and London for one journey to and fro each session. Railway fare (third class) is allowed by the Board for one journey to London to a Free Student upon taking up his Free Studentship.

6.—(a) A Local Scholarship is tenable for three years, with an allowance of 20*l.* a year, at any School of Art recognised by the Board, subject to the following conditions:—

- (i) That the fees for instruction will be remitted to the holder of a Local Scholarship;
- (ii) That, except in so far as for any limited period his instruction in the School is, with the approval of the Board, replaced for the purposes of this Article by training given elsewhere, the Local Scholar will be under instruction at the School of Art throughout the School year for 30 hours each week, of which 18 must be in the day time, at times when the School is open for instruction in accordance with the time-tables approved by the Board.

(b) The Scholarship begins on the date at which the School where it is tenable re-opens after the summer vacation each year.

(c) The allowance will be paid in four equal instalments due on the following dates—December 30, February 28, May 31, and on the date on which the School closes for the session. Payment will be made on the receipt of a certificate from the Head Master and Correspondent of the School of Art that the Scholar has attended regularly and pursued his studies satisfactorily.

General Conditions.

7. Royal Exhibitions, National Scholarships, Local Scholarships, and Free Studentships are open only to British subjects, and the Board may refuse to award them to persons whose financial circumstances do not warrant such aid. No two of these awards may be held concurrently, nor may one of them be held concurrently with

a Local Art Exhibition; but, subject to the sanction of the Board, any of these awards may be held concurrently with other Scholarships or aid granted by Local Authorities.

8. In the event of any revision of these Regulations candidates who have obtained any one of these awards will hold the award until its expiration under the Regulations in force during the year in which the award was made.

9. A candidate who has held a Royal Exhibition, a National Scholarship, or a Free Studentship is ineligible to compete again for any award under this Chapter.

10. A candidate who has held a Local Scholarship is ineligible to compete again for a similar award.

11. No person will be accepted as a candidate for a National Scholarship who is not a registered Art student and whose ordinary employment for a reasonable time immediately prior to his application for admission to the competition has not been in a trade which depends upon Decorative Art.

12. The tenure of a Royal Exhibition, National Scholarship or Free Studentship is subject to compliance with the regulations of the Royal College of Art, and to the satisfactory progress of the holder in the approved course of study.

Determination of the Awards.

13. These awards will be made upon the results of the Board's Examinations in Drawing, Painting, Modelling, Pictorial Design, and Industrial Design, or, in the case of candidates in Architecture, upon those of the Intermediate Examination of the Royal Institute of British Architects, to be held in June 1914.

14. Candidates, if eligible to take the examination,* may present themselves for examination either in Drawing, or in Painting, or in Modelling, or in Pictorial Design, or in Industrial Design, or in Architecture, and at least one Royal Exhibition, one National Scholarship, one Free Studentship, and one Local Scholarship will, provided that there are candidates of sufficient merit, be awarded in each of these six subjects, *but no candidate in Drawing will be regarded as of sufficient merit for the award of a*

* For the conditions governing the admission of candidates to the Board's Art Examinations, see Rules 110 (Regulations for Examinations in Art, 1914).

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Royal Exhibition or National Scholarship who has not reached a high standard of attainment and shown special promise. The remaining Awards will be allocated by the Board to the several Examinations, after considering the number, as well as the merit, of the candidates taking each Examination, and with a bias, in the case of the Local Scholarships, in favour of candidates taking the Examination in Drawing, and in the case of Free Studentships, in favour of candidates taking the Examination in Industrial Design. Candidates in Architecture must take Architectural Design as their optional subject in the Intermediate Examination of the Royal Institute.

Candidates proposing to compete at the Board's Art Examinations for one of the above Awards must apply for admission to the Examination upon the prescribed Form, which should be duly completed and returned to the Board not later than the 1st March, accompanied by the prescribed fee of 10s. This fee must also be paid to the Board of Education by candidates taking the Intermediate Examination of the Royal Institute of British Architects solely for the purpose of competing for one of the Board's Awards. Candidates taking the Intermediate Examination of the Royal Institute, partly for the purpose of competing for one of the Board's Awards, and partly for the purpose of professional registration, will pay to the Institute such fees as may be required by the Institute.

CHAPTER II.

LOCAL EXHIBITIONS IN ART.

15. Where a Local Education Authority or other persons (in this Chapter referred to as the Managers of the local fund) contribute a sum of not less than 25*l.* per annum towards an approved Local Art Exhibition, the Board may contribute towards the Exhibition subject to the conditions stated in this Chapter. The Board's contribution will not exceed 25*l.* per annum in respect of any one exhibitor, nor will it be such as to make the total amount of the Exhibition exceed the sum recognised by the Board as reasonably paid by the Managers of the local fund in respect of the exhibitor's maintenance allowance and fees or other payments for his instruction.

16. The local contribution may be made from a rate levied under Part II. of the Education Act, 1902, or from subscriptions of living persons raised for this definite purpose. Endowments or moneys held in trust, unless subscribed for this definite purpose by the donor during his lifetime, or funds derived from the residue under the Local Taxation (Customs and Excise) Act, 1890, or other mere surplus funds, will not be regarded as local contributions for the purpose of this Chapter.

17. The conditions of award of the Exhibition may be determined by the Managers of the local fund with the approval of the Board, but must always include provision for the award to be made on the results of a competition held either in connection with the Board's annual Examinations in Art or according to some other method approved by the Board. The Exhibition may not be held concurrently with any other of the Board's awards in Art. The Board may refuse to contribute towards any Exhibition for which there is not a sufficient number of candidates, or to approve the award to a candidate who is insufficiently advanced or whose financial circumstances do not appear to warrant such aid.

18. No award will, as a rule, be approved by the Board unless the candidate has reached a standard comparable with that required for the award of a Royal Exhibition or a National Scholarship.

19. The place or places where the Exhibition is to be tenable, and where the exhibitor is to pursue his studies, may be fixed by the Managers of the local fund, subject to the following conditions:—

(a) The exhibitor must attend some course of Art instruction of an advanced character at a college or other institution at which such a course is provided for the students ordinarily in attendance at the institution as well as for exhibitors under this Chapter. The course proposed to be taken by the exhibitor must be approved by the Board, and it must as a rule be one of the courses so provided.

(b) The exhibitor must have the option of holding his Exhibition at the Royal College of Art subject to compliance with the regulations of that institution. If the exhibitor exercises this option, the fees for instruction will be remitted.

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- (c) If the exhibitor attends a college or other institution aided or maintained by the Managers of the local fund, the Board may require that the fees or ordinary payments in respect of the instruction shall be wholly or partially remitted.
- (d) The exhibitor's whole time must be devoted to instruction in the approved course.

20. The Board may require a report on the progress of the exhibitor to be made by one of their officers deputed for this purpose.

21. The Board's contribution will not be payable till the Managers of the local fund have disbursed to or on behalf of the exhibitor the full amount of the Exhibition, including the amount of the Board's grant. Before paying their contribution the Board will require (i) a satisfactory certificate from the Principal of the institution at which the Exhibition is held as to the progress of the exhibitor; (ii) evidence from the institution of the receipt by them of the exhibitor's fees or other payments for instruction, *if they have not been remitted*; and (iii) a receipt from the exhibitor for the amount of his maintenance allowance.

22. Particulars of any Exhibition to which it is desired that the Board should contribute under this Chapter must be returned on the prescribed form in time to admit of their proper consideration by the Board, and their due advertisement in the locality, and in any case not later than the *1st March 1914*. *It should also be noted that applications by candidates for admission to the Board's Art Examinations must be submitted to the Board on the prescribed Form not later than the 1st March.* The names of the candidates to whom it is proposed that Exhibitions should be awarded, and of the institutions where they will pursue their studies, *and a statement of the nature of the Courses to be taken*, must be furnished to the Board on the prescribed form before the *1st September 1914*.

23. Applications for the renewal of Exhibitions for a second or third year must be made on the prescribed form not later than the *1st September*.

CHAPTER III.

OTHER AWARDS.

PRINCESS OF WALES' SCHOLARSHIPS.

24. Two Princess of Wales' Scholarships, of about the value of 25*l.* and 11*l.* respectively, are open to competition each year and are offered to the two women students of the Schools of Art who are granted the highest prizes of the year in the National Competition. These Scholarships, which are intended to enable students to continue their regular course of instruction in a School of Art, *are tenable during the School Year next following that in which the Competition on which they were awarded took place, and must be held in the School or Schools of Art which the students were attending during the Session in which they gained the Scholarships.* The Scholarships are not awarded to the same persons for more than three years in succession.

25. Each "Princess of Wales' Scholar" is required to present half-yearly reports, showing the course of study she has pursued at her School of Art during her tenure of the Scholarship and her attendances thereat. These reports must be sent to the Board, through the Correspondent of the School of Art in which the Scholar is studying, on the 31st of March and 31st of July. A moiety of the sum awarded will be paid on the receipt of each report if it be satisfactory.

SHORT COURSES OF INSTRUCTION IN ART.

26. Short Courses of Instruction in Art are given at the Royal College of Art during July and August for a limited number of Art Teachers and Advanced Art Students whose preliminary training enables them to profit by the instruction.

27. A selected candidate will have third-class railway fare for one journey from his home to London at the beginning, and for one journey to his home at the end of the Course; also a grant of 1*l.* a week towards his expenses while attending the Course. In the case of Teachers resident in London or in its vicinity a reduction is made in the grant.

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Information as to the precise period of these Courses and Forms of Application for admission are circulated about April.

VISITS TO MUSEUMS AND CENTRES OF ART INSTRUCTION.

28. Grants will be made to enable a limited number of teachers and students of Schools of Art and Art Classes (a) to see the works in the National Competition exhibited at South Kensington, to visit and study in the Victoria and Albert Museum, the Royal College of Art, and other Institutions; and (b) in special cases, to visit Foreign Towns, Schools, Galleries, and any approved centre of Art instruction, for the purposes of studying and making sketches of buildings and of objects. Teachers or students to whom such grants are made may be required on any of the above occasions (a) and (b) to do special work for the Board.

Application must be made on the prescribed Form not later than the *15th* June.

Provided that a satisfactory report, together with sketches, drawings, or other work, be submitted:—

(a) Applicants who are selected to see the works in the National Competition, or to visit and study in the United Kingdom, will be allowed third-class railway fare and not more than 7*s.* 6*d.* a day towards their expenses;

(b) Applicants selected to visit and study in Foreign Towns will be allowed second-class railway fares while travelling abroad, and second-class boat fare, and not more than 10*s.* a day towards their expenses.

No cab or omnibus fares will be allowed.

Teachers and students crossing from Ireland will be allowed first-class steamboat fare.

Rules 108.

BOARD OF EDUCATION.

REGULATIONS

FOR THE

NATIONAL COMPETITION, 1914.
CONTINUED FOR 1915.



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Rules 108.

(N.B.—Certain passages which did not appear in the Rules for 1913 are printed in italics.)

BOARD OF EDUCATION, WHITEHALL, LONDON, S.W.

REGULATIONS FOR THE NATIONAL COMPETITION, 1914.

The National Competition of 1914 will be held under the conditions stated in these Regulations. Articles 70, 72, 74, and 75 of the Regulations for Technical Schools, &c., 1909-10 are hereby cancelled.

General Conditions.

1. (a) The National Competition is open to registered students of Schools and Classes recognised for the year 1913-14 under the Regulations for Technical Schools, &c., or under the Statement of Grants available in aid of Technological and Professional work in Universities. It is also open to registered students of Schools and Classes in Art recognised by the Scotch Education Department or by the Department of Agriculture and Technical Instruction for Ireland. On the application of the Government or Educational Department or other responsible Public Authority registered students of Schools and Classes in Art in any Dominion, Colony, or Dependency, may be admitted to the Competition.

(b) Managers and Teachers of Schools and Classes, intending to submit students' works for the National Competition, 1914, are requested to remember that only such works should be selected as appear to them to possess special excellence and to have a reasonable chance of gaining awards.

2. All works submitted must have been wholly executed during the twelve months from 1st April, 1913, to 31st March, 1914, by registered students in the class-room during the hours of meeting of the School or Class as part of their course of instruction during that period; but studies, executed away from the School, of growing flowers, fruit, plants, &c., of buildings, of objects in public and private collections, and of manufactured works in material, are eligible, if each is marked by the Master as executed entirely under his supervision. This condition also applies to works executed in the School from sketches or measurements made away from the School. *Works already submitted for the Art Class Teacher's or Art Master's Certificate are eligible, provided that they have been executed during the prescribed period and under the prescribed conditions.*

3. Specimens in various materials, though not executed by the students, and work executed by them but not under the

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conditions set forth in the preceding paragraph, may be sent up with the original drawn, modelled, or painted designs, if necessary to illustrate or explain these.

4.—(i) A person is ineligible to submit a work for the National Competition who either—

(a) has *during the period 1st April, 1913, to 31st March, 1914*, taught in any School, whether recognised by the Board of Education or not, the subject in which it is proposed to submit a work; or

*(b) has been a student of the Royal College of Art during the period April 1st, 1913, to March 31st, 1914, or

†(c) has at any time attended the Royal College of Art as a Student-in-Training, Royal Exhibitioner, National Scholar, Free Student, Royal College of Art Scholar, Junior Scholar, Local Exhibitioner, or Local Scholar, or has at any time been granted free admission at that College.

(ii) If any works by ineligible persons are submitted for the National Competition, they will be ignored; that is to say, no entries in respect of them will appear in the Result List and they will not be included in the Exhibition.

(iii) The Board may, if they think fit, require any competitor to undergo a special test set by them and carried out under conditions similar to those of the Art Examinations, or, in the case of a competitor who habitually designs not on paper but in material, under conditions appropriate to his craft. If the result of this test is unsatisfactory the Board may exclude the work from the Competition.

5. The latest day for sending up works is the **1st April, 1914**.[†]

Notice is given that the Board may be unable to admit any exceptions to this regulation.

Subjects, Numbers, and Dimensions of Works, &c.

6. The subjects and divisions of subjects in which works may be submitted for the Competition are set out below. Further details are given in the Appendix.

Subjects 8b¹ to 8f inclusive. Drawing the human figure, or animal forms, from the "round" or from nature.

Subjects 9a to 9d² inclusive. Anatomical studies of the human figure or of animal forms.

* A student of the Royal College of Art may submit a work for the National Competition if the work was entirely executed by him between the 1st April 1913 and the date of his entry to the Royal College of Art.

† This paragraph does not apply to students who have only attended the Summer Courses at the Royal College of Art, such as those referred to in paragraphs 26 and 27 of the Interim Regulations for Scholarships and other Awards in Art, 1914.

‡ In the case of works from the Dominions, Colonies, and Dependencies special provisions are applicable.

Subjects 10a to 10c inclusive. Drawing flowers, foliage, landscape details, and objects of Natural History from nature.

Subject 12a. Painting ornament from the east, &c.

Subject 14a. Painting (from nature) flowers or still-life in water-colour, oil, or tempera, without backgrounds.

Subjects 14b and 14c. Painting views of buildings, drapery.

Subjects 15a and 15b. Painting (from nature) groups of still-life, flowers, &c., as compositions of colour.

Subject 16a. Painting the human figure or animals in monochrome from casts.

Subjects 17b and 17c. Painting the human figure or animals.

Subjects 18b and 18c. Modelled, carved, or wrought studies of ornament.

Subjects 19a to 19f, also 19h to 19l. Modelled, carved, or wrought studies of the human figure, animals, &c.

Subject 20. Modelled, carved, or wrought studies of fruits, flowers, foliage, and objects of Natural History from nature.

Subject 22a. Studies of plants, birds, fishes, &c., as preparatory studies for Design.

Subjects 22b, 22d and 22e. Elementary Design.

Subjects 23a to 23h inclusive. Drawings from actual measurements of structures, machines, &c.; original applied designs; technical or miscellaneous studies.

Subject 24. Work designed and executed in material wholly by the student:—

- (a) Complete objects or articles.
- (b) Portions of objects or articles.
- (c) Surface decoration of objects or articles.

7.—(a) Only two sheets of work in a Subject, or one set of modelled, carved, or wrought studies when mounted on boards, or in the case of unmounted works two examples, may be selected to represent any one student, except that—

- (i) in Subject 23a, one set of not more than four carefully finished drawings with sketches and measurements may be submitted;
- (ii) in Subject 23g, one set of not more than four pencil drawings with inked tracings and blue prints may be submitted, with sketches and measurements;
- (iii) in Subjects 23b, c, d, e, f, h, and 24, examples of a student's work in the various branches of Design which he is studying, may be submitted.

(b) In the case of works in Subjects 24 (b) and (c) the extent of the portion actually designed and worked in material by the student must be clearly indicated.

(c) Stencil plates, wood blocks, and etchings on copper plates, &c., may accompany proofs and impressions from them, but it is preferable that proofs and impressions alone should be submitted.

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(f) Instructions as to the address to which the works are to be forwarded, will be issued later.

(g) The Board will only pay for the carriage of works if they are sent by Goods Trains, *or, in the case of Schools situated near the Board's offices, by van or carrier.*

11. The Board do not hold themselves responsible for any loss or damage which may occur to the works. All reasonable care will be taken of them while they are in the custody of the Board.

Awards.

12. The awards for the best works in the National Competition are about 12 Gold, 60 Silver, and 200 Bronze Medals, and a limited number of Book Prizes and Commendations. The number of awards may be increased or decreased according to the merit of the works submitted.

13. The Gold Medals are usually awarded in the following Subjects:—

- (a) Drawing from a single antique statue. (Subject 8b².)
- (b) Drawing from the nude living model, without a background. (Subject 8c².)
- (c) Time sketches of the human figure from the nude. (Subject 8e.)
- (d) Painting the human figure from a single antique statue. (Subject 16a.)
- (e) Painting the nude figure from nature. (Subject 17e.)
- (f) Modelled, carved, or wrought studies of the human figure from a single antique statue. (Subject 19b².)
- (g) Modelled, carved, or wrought studies of the human figure from the nude living model. (Subject 19e.)
- (h) Designs for Weaving, Embroidery, Tiles, Mosaics, Iron Work, Goldsmiths' Work, Wall Papers, Printed Textiles, Architectural Work, and Decorative Work; Ornamental Studies; and Modelled Designs of various kinds, &c. (Subjects 23 and 24.)

14.—(a) A Competitor who in respect of different subjects is awarded more than one Medal of the same class in the same year or in succeeding years, receives books, &c., instead of a second Medal.

(b) Where a Competitor obtains two or more awards in the same year for works in the same subject, he will receive a prize in respect of only one of the awards. Certificates will be issued in lieu of the other awards.

(c) The award of a Gold, Silver, or Bronze Medal or a Book Prize may be made to a Competitor once in each of the Subjects 23 (a) to 23 (h) inclusive, or alternatively for work in Design of a similar character executed in material and submitted under Subject 24.

(d) A Competitor awarded a Medal or Prize in a subject for which he has previously been awarded a Medal or Prize of the same or a higher class, will not receive the Medal or Prize, but will be given a Certificate recording his success. In the case of Subject 24 this applies also where the Subject of the award is not the same as that of the previous award, but is similar to it.

15. The Managers of a School or Class must undertake to make arrangements for obtaining the prizes of books, instruments, &c., which are to be given to the students entitled to receive them. The first award of a Medal, whether Gold, Silver, or Bronze, carries with it books to the value of 1*l*. to accompany the Medal. Students entitled to receive Medals may, if they prefer it, receive instead books, &c., of the value shown below:—

Instead of Gold Medal	-	-	-	£ 10
" " Silver "	-	-	-	" 4
" " Bronze "	-	-	-	" 2

The value of a Book Prize is 1*l*.

Exhibition of Works.

16. A selection of the works gaining Medals and Prizes at the National Competition of 1914 will be exhibited in London probably in August.

17. Particulars of grants which may be made to enable a limited number of teachers and students of Schools of Art and Art Classes to visit London to see the exhibition of selected works and for other purposes, will be found in paragraph 28 of the Interim Regulations for awards in Art, 1914.

L. A. Selley-Bigge

22nd October, 1913.

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Appendix.

Classification of Subjects for the National Competition.

Subject 8. DRAWING THE HUMAN FIGURE. OR ANIMAL FORMS, FROM THE "ROUND" OR FROM NATURE.

- b*¹. Shaded (details).
- b*². Shaded (whole figures).
- c*¹. Studies of heads, hands, and feet from life.
- c*². Studies of the human figure from nude model.
- d*. Studies of drapery arranged on figure from antique or on the living model.
- e*. Time sketching.
- f*. Sketching from memory.

Subject 9. ANATOMICAL STUDIES OF THE HUMAN FIGURE OR OF ANIMAL FORMS.

- a*. Students' own setting of bones and muscles drawn or painted within the outline of a figure.
- b*¹. Drawn or painted from the skeleton or anatomical figure.
- b*². Drawn or painted from copies.
- c*. Students' own setting of bones and muscles, modelled.
- d*¹. Modelled from the skeleton or anatomical figure.
- d*². Modelled from the flat.

Subject 10. DRAWING FLOWERS, FOLIAGE, LANDSCAPE DETAILS, AND OBJECTS OF NATURAL HISTORY, FROM NATURE.

- a*. In outline.
- b*. Shaded.
- c*. In monochrome.

Subject 12. PAINTING ORNAMENT FROM THE CAST, &c.

- a*. In monochrome either in water-colour, oil, or tempera.

Subject 14. PAINTING DIRECT FROM NATURE.

- a*. Flowers, or still-life, in water-colour, oil, or tempera, without backgrounds.
- b*. Views of buildings.
- c*. Drapery.

Subject 15. PAINTING (FROM NATURE) GROUPS OF STILL-LIFE, FLOWERS, &c. AS COMPOSITIONS OF COLOUR.

- a*. In oil colour.
- b*. In water-colour or tempera.

Subject 16. PAINTING THE HUMAN FIGURE OR ANIMALS IN MONOCHROME FROM CASTS.

- a*. In oil, water-colour, or tempera.

Subject 17. PAINTING THE HUMAN FIGURE OR ANIMALS.

- b*. The head or draped figure from nature.
- c*. The nude figure from nature.

Subject 18. MODELLED, CARVED OR WROUGHT STUDIES OF ORNAMENT.

- b*. From casts of ornamental compositions for pilasters, friezes, &c.
- c*. From drawings or photographs.

Subject 19. MODELLED, CARVED OR WROUGHT STUDIES OF THE HUMAN FIGURE OR ANIMALS.

- a. Hands and feet from casts.
- b. Heads and masks from casts, in the round, or from casts in relief.
- i. Heads and masks in relief from casts in the round.
- j. Whole figures from casts of the figure in the round, or from casts of the figure in relief.
- k. Whole figures in relief from casts of the figure in the round.
- c. Modelling the figure or animal forms from the flat.
- d. Heads, hands, and feet from nature in the round.
- l. " " " in relief.
- e. The human figure from the nude model in the round.
- h. " " " in relief.
- f. Modelling drapery from actual stuffs and not from casts.

Subject 20. MODELLED, CARVED OR WROUGHT STUDIES OF FRUITS, FLOWERS, OR FOLIAGE, AND OBJECTS OF NATURAL HISTORY, FROM NATURE.

Subject 22. ELEMENTARY DESIGN.

- a. Studies treating natural objects ornamentally.
- b. Ornamental arrangements to fill given spaces in outline, monochrome or modelled.
- d. Studies of historic styles of ornament drawn or modelled.
- e. Studies in lettering.

Subject 23. DRAWINGS FROM ACTUAL MEASUREMENTS OF STRUCTURES, MACHINES, &C., APPLIED DESIGNS, TECHNICAL, OR MISCELLANEOUS STUDIES.

- a. Architecture and building construction—drawings from actual measurements, taken by the students, of existing structures.
- b. Architecture and building construction—original designs.
- c. Ornamental design as applied to decorative or industrial art.
- d. Figure composition, and ornamental design with figures, as applied to decorative or industrial art.
- e. and f. The same as 23c and 23d, but in relief.
- g. Machine construction and naval architecture—drawings from actual measurements, taken by the student, of existing machines, ships, &c.
- h. Machine construction and naval architecture—original designs.

Subject 24. WORK DESIGNED AND EXECUTED IN MATERIAL WHOLLY BY THE STUDENT.

- a. Complete objects or articles.
- b. Portions of objects or articles.
- c. Surface decoration of objects or articles.

In the case of works under (b) and (c) a clear statement must be attached to each work, indicating the extent of the portion actually designed and worked in material by the student.

N.B.—Sets of three studies of plant form, and sets comprising studies in colour of growing plants, together with three designs based thereon, such as were formerly required for the Art Class Teacher's Certificate may be classified under Subject 16 and Subject 22 respectively.

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FOR TEACHERS OF ART.



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BOARD OF EDUCATION.

RULES AS TO THE ISSUE OF TEACHING CERTIFICATES FOR TEACHERS OF ART.

1. Candidates must have passed the Board's Examination in Drawing, and either

- (a) the Board's Examination in Painting, or Modelling, or Pictorial Design, or Industrial Design; or
- (b) the Final Examination of the Royal Institute of British Architects in Architecture;

but for the present the Board will accept, in lieu of a pass in Drawing, the Art Class Teacher's Certificate together with First Class successes in Drawing from the Antique and Drawing from Life obtained in 1914 or previous years.

2.—(a) A candidate must also have passed the Board's Preliminary Examination for the Elementary School Teacher's Certificate or some other Examination indicating the satisfactory completion of a preliminary general education, or must have submitted other evidence of having received such education.

A list of other Examinations which the Board are prepared to accept is given in Appendix A.

(b) In the case of a student who has not passed an accepted examination, but who has been educated at a Secondary School on the list of Secondary Schools recognised by the Board as Efficient, and had left that school before 31st July, 1912, the Board would be prepared to receive a statement from the Head Master or Head Mistress of the school in evidence that he has satisfactorily completed a preliminary general education. Any such statement should show, amongst other things, during what years the candidate was in the school, what Form he was in at leaving, what his age was at leaving, and what test (if any) of general education he passed, and at what age.

(c) Where a candidate had completed his general education before 31st July, 1912, and the Board are of opinion that on account of his age or other sufficient reason an examination test of the kind contemplated above is unsuitable, and such a statement as that mentioned in the preceding paragraph is not forthcoming, they will for the present be prepared to accept as evidence of sufficient general education any of the following certificates of attendance at University Extension Courses:—the Affiliation Certificate of Oxford University; the Certificate of the Vice-Chancellor of Cambridge University for Systematic

Study; the Certificate of the Vice-Chancellor of London University for Continuous Study, or the Diploma in the Humanities of London University.

3. A candidate must also be over 19 years of age and have furnished a satisfactory medical certificate in a prescribed form, indicating his fitness for the work of a teacher. An indication of the Board's requirements in regard to the standard of physical fitness which is desirable is contained in Appendix B.

4.—(a) During his training a candidate must have completed to the satisfaction of the Board an approved course in the principles and practice of teaching and school management at an institution recognised for the purpose, affording practice, under the supervision of an expert master of method, in the teaching of artistic subjects both to adults and to children, by the methods of collective and individual instruction. It is contemplated that this course should extend throughout a school session in the sense that professional preparation for teaching should be the dominant motive of the student's work during that session, although this should not, of course, prevent him from simultaneously making further progress in his general art studies. It will, however, be open to any recognised institution to propose a course which extends over more than one session, and gives a correspondingly less time in each session to this professional training.

(b) Finally, he must have passed at the close of his course of training an Examination in the principles of teaching and school management, with special reference to the relations of art to industry, and to the place of artistic subjects in systems of education, and must have reached a reasonable literary standard in the papers worked at this Examination. Special Examinations for this purpose will be held by the Board. Each candidate will be charged a fee of 3s. 6d.

(c) An indication as to the range of the Board's Examination is given in the Syllabus printed as Appendix C.

5. The Teaching Certificate issued by the Board will set out the qualifying Examinations passed by the candidate, and will specify those (if any) in which he passed with distinction; and a subsequent entry may be made if the candidate passes any further Examinations in Art. The certificate may, if desired, take the form of an endorsement by the Board upon an approved diploma awarded by the institution at which the candidate has been trained.

L. A. Selby-Bigge

24th August, 1914.

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Appendix A.

LIST OF EXAMINATIONS.

1. The Higher Certificate Examination of the Oxford and Cambridge Schools Examination Board.
2. The London University Matriculation Examination.
3. The London University Senior School Examination.
4. The Matriculation Examination conducted by the Joint Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield.
5. The Senior School Certificate Examination of the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield.
6. The Birmingham University Matriculation Examination, or the Examination for such Senior School Certificates as exempt the holders from the Matriculation Examination.
7. The University of Wales Matriculation Examination.
8. The Durham University Matriculation Examination.
9. The Bristol University Matriculation Examination.
10. The Oxford University Higher Local Examination.
11. The Cambridge University Higher Local Examination.
12. The Oxford University Local Examination for Senior Students.
13. The Cambridge University Local Examination for Senior Students.
14. The College of Preceptors Examination for the Diploma of Associate.
15. The First Class Certificate of the College of Preceptors.
16. The Senior Certificate Examination of the Central Welsh Board.
17. In the case of candidates from Scotland the Board will be prepared also to accept—
 - (a) The Preliminary Examination of the Joint Board of Scottish Universities;
 - (b) The Leaving Certificate Examination of the Scotch Education Department;
 - (c) The King's Scholarship Examination of the Scotch Education Department;
 - (d) The L.L.A. Examination of the University of St. Andrews.
18. In the case of candidates from Ireland the Board will be prepared also to accept—
 - (a) The Matriculation Examinations of the University of Dublin, the National University of Ireland, and the Queen's University of Belfast;
 - (b) The Senior Grade Examination of the Irish Intermediate Education Board.

Appendix B.

MEDICAL EXAMINATION OF CANDIDATES FOR TEACHING CERTIFICATES FOR TEACHERS OF ART.

1. It will be a condition of the issue of a Teaching Certificate in Art that the candidate should have furnished a medical certificate in a prescribed form indicating his fitness for the work of a teacher, and that the Board should be able to regard the certificate as satisfactory.
2. The Board contemplate that candidates will, as a rule, submit themselves to a medical examination for this purpose at the time of their entry on the course of pedagogic training, which it is anticipated, will normally follow the completion of their technical qualifications by passing Art and other Examinations.

3. Candidates will be required to submit themselves, for the medical examination prescribed by the Board, to one of the Medical Officers nominated by the Board for the purposes of the Elementary School Teachers (Superannuation) Acts, 1898 to 1912. The examination will be of the same character as that required in the case of candidates for the Elementary School Teacher's Certificate; but, in considering the report of the Medical Officer, the Board will have regard to considerations specially affecting teachers in Schools of Art, and will act upon the principles set out in paragraphs 4—7 below.

Candidates who notify to the Board their wish to be examined will be furnished with a List of Medical Officers nominated by the Board for the purpose, and will be required to select one of the doctors on the list. The list contains the names of some Women Doctors.

The Board will communicate with the doctor selected, and will request the candidate to arrange with the doctor for his examination. The fee for the examination, which is 10s. 6d., must be paid by the candidate.

The doctor will forward the medical report direct to the Board.

4. Any candidate who is suffering from a disease of a character which would render him a danger to the health of the students under his instruction will be ineligible for recognition.

5. The Board will also be unable to recognise candidates who, though in good bodily health, suffer from physical defects, especially of vision, hearing, or speech, in such a degree as to make them incapable of being efficient teachers. But, if such defects are capable of remedial treatment, the Board will be prepared to reconsider the question of recognition when treatment has been obtained.

6. The medical report upon a candidate may indicate that his health is already affected temporarily, or may in the near future be so affected, by conditions which can be ameliorated, but are likely to lead, in the absence of remedial treatment, to permanent injury to health and to loss of efficiency. In such cases the Board may have to consider whether it shall not be a condition of their recognition (if given) that the candidate shall submit himself to treatment at an early opportunity.

7. The Board do not at present contemplate refusing recognition to a candidate merely because he is not likely to be able to give a full term of active service, provided that he is clearly suitable in other respects and can reasonably be expected to render effective service for a substantial period.

It should, however, be borne in mind that in the event of a superannuation scheme being brought into force for teachers in Schools of Art, it may be found necessary to impose stricter tests of health for teachers to whom the scheme is applicable.

8. If an intending candidate has had a serious illness before, or in the course of, the preliminary stage of his preparation, the Managers should consider the advisability of urging him, or his parents, to ascertain whether the illness may have affected his suitability for the work of a teacher. This is especially important in the case of such an illness as rheumatic fever, or one of the forms of tuberculous disease.

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Appendix C.

SYLLABUS FOR THE BOARD'S EXAMINATION IN THE PRINCIPLES OF TEACHING AND SCHOOL MANAGEMENT WITH SPECIAL REFERENCE TO ART.

- (i) The mind of the student and how to train it.
 - (ii) The relation of art to the life of the individual and the community in the past, the present, and the future, and its place in educational systems.
 - (iii) The relation of art to industry.
 - (iv) The methods of teaching drawing and art in Elementary Schools, Trade Schools, Secondary Schools, and Schools of Art.
 - (v) The organisation and equipment of Schools of Art.
-

For Official Use.

BOARD OF EDUCATION.

PROSPECTUS

OF THE

ROYAL COLLEGE OF ART

LONDON.

(FOR SESSION 1914—1915.)



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NOTE.—*New or substantially modified passages are printed in italics.*

PROSPECTUS OF THE ROYAL COLLEGE OF ART, LONDON.

Objects of College.

1. The Royal College of Art is maintained for the purpose of training Art Masters and Mistresses for the United Kingdom and for the instruction of students in Drawing, Painting, Modelling, and Designing, for Architecture, Manufactures, and Decoration. Whilst the Royal College of Art is primarily intended for the instruction of teachers and students selected by competition in the Art Examinations of the Board of Education, other students are admitted so far as there may be accommodation for them, on the payment of fees.

Associateship.

2. The Full Associateship is granted to students who have qualified in the four Schools of the College. *See* § 11.

The Schools Associateship is granted to students who have qualified in whatever School of the College is selected by them. *See* § 12.

Certificates of Merit may be awarded to students. *See* § 13.

Course of Instruction.

3. The instruction in the College is arranged with a view to students passing through a course of instruction either in all the four Schools, viz.: Architecture; Ornament and Design; Decorative Painting; Sculpture and Modelling; or in one or more of the Schools only (*see* syllabuses of courses of instruction page 18 *et seq.*): Instruction is also given in a Supplementary School of Etching and Engraving and in Craft Classes.

Organisation of College.

4. Each School of the College is divided into an Upper and a Lower Division, and candidates upon their admission to the College are placed in one or other according to their proficiency. The students come under two categories:—

- (a) Those who are passing through the course for the training of Teachers, with a view to obtaining the Full Associateship.
- (b) Those who are specialising in one or other of the four Schools of the College, with a view to obtaining the Schools Associateship. *See* note below.

NOTE.—All students must pass satisfactorily through the Introductory Course of Architecture before specialising in any other School; but those who show that they have a general knowledge of Architecture, within the limits of the Introductory Course given on page 17 of the Prospectus, may pass directly to the School in which they desire to specialise.

The courses are arranged for the holders of National Scholarships, Royal Exhibitions and Free Studentships, the regulations affecting whom are given at page 13 *et seq.* Other students will be required to follow one or other of the above courses.

There is no age limit for candidates desiring to enter the College.

CONDITIONS OF ADMISSION AND FEES.

Admission.

5.—(a) Holders of Royal Exhibitions, National Scholarships, and Free Studentships are admitted to the College without being required to pass the entrance tests or to submit works (§§ 9 and 10 below).

(b) Holders of Local Exhibitions are required to pass the entrance tests but not to submit works.

(c) All other candidates for admission to the courses specified in §§ 3 and 4 must fulfil the requirements of §§ 9 and 10.

*Fees.**

6. The fee for either of the courses specified in §§ 3 and 4 is £12 10s. per term. For external students not following either of these courses the fee for the School of Etching and Engraving is £3 3s. and for each Craft Class (§ 15) attended £2 2s. per term. When students join at half-term, half the full fee is charged. All fees must be paid in advance to the Registrar of the College.

Free Admission.

7.—(a) Exemption from fees is granted to holders of Royal Exhibitions, National Scholarships, Free Studentships and Local Exhibitions.

(b) Exemption from fees may be granted by the Board to other students following one or other of the courses of the College, if specially recommended for such exemption by the Principal. In recommending renewal of Scholarships, the student's regularity of attendance will be considered together with other qualifications.

(c) The period for which exemption from fees may be continued will in each case depend upon the conduct and progress of the student, which must be satisfactory to the Board. In no case can such exemption be continued for more than five years.

8. The number of fee-paying students may not exceed 150 at any one time; and the total number of free and fee-paying students per Term in the College is limited to 350.

* Cheques and Postal Orders should be made payable to the Board of Education or Order, and should be crossed "Account of H.M. Paymaster-General."

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ENTRANCE TESTS AND EXAMINATIONS FOR FULL ASSOCIATESHIP COURSE.

9.—(a) Candidates not exempted from this requirement (see § 5) who desire to enter for the course of instruction for the Full Associateship, must submit, a fortnight before the end of a term, or half term, or in the case of candidates wishing to enter the College in October who are unable to submit the works earlier, three weeks before the beginning of the session, a folio of drawings as mentioned below :—

Architecture.—A measured study in pencil upon an imperial sheet of some portion of an ancient building to the scale of not less than half inch to one foot; also a drawing of mouldings, full size, and of some ornament.

Sculpture.—Two studies from a nude figure, to fill an imperial sheet, carefully drawn with the point.

Painting.—(1) A drawing in pencil or chalk of an Antique figure.

(2) An anatomical drawing (bones and muscles) of the same figure.

(3) Drawings, in chalk or pencil, from the life, full size, of a head, hand and foot.

Ornament and Design.—Three very careful drawings of flowers and foliage, one in pencil, one in water-colour, one in pen and ink, all from the same subject.

A sheet of lettering done from good Roman capitals. The selection of a good plain type is essential.

(b) Candidates who have had works accepted for the Art Class Teacher's or Art Master's Certificates, or who have obtained awards in the National Competition for work in subjects similar to those required, will not be called on to submit works in those subjects. Candidates wishing to take advantage of this privilege should submit with their applications a list of the successes they have obtained.

(c) If these drawings are accepted, candidates must take test examinations in the four subjects, of which they must pass in three. Such test examinations will be held at the commencement of each term and half term.

The following are the subjects for the test :—

Architecture.—A drawing of a small architectural object in the Victoria and Albert Museum selected for the purpose.

Time allowed : 12 hours.

Sculpture.—A model in clay of an eye from Michael Angelo's "David."

Time allowed : 6 hours.

Painting.—(1) A drawing, in chalk or pencil, to fill an imperial sheet, of an Antique figure.
Time allowed: 5 hours.

(2) A drawing, in chalk or pencil, from the life, full size, of a head, hand and foot.
Time allowed: 9 hours.

Ornament and Design.—A drawing from memory of a piece of foliage such as that of the oak, ash or lime.

Lettering by hand of a given sentence, and a simple problem in designing, for a particular purpose, to fill a given space.

Time allowed: 9 hours.

(d) Candidates who have passed one of the Board's Art Examinations in 1913 or 1914, or have obtained 1st class successes at Examinations prior to 1913, in subjects similar to those required, will not be called on to enter for examination in those subjects. Candidates wishing to take advantage of this privilege should submit with their applications a list of the successes they have obtained.

Candidates who have sat for Examination in 1914 and failed, may apply to have the work done by them at the Examination considered and a decision given as to whether they may be exempted from any part of the test.

ENTRANCE TESTS AND EXAMINATIONS FOR SCHOOLS ASSOCIATESHIP COURSE.

10. A candidate who desires to enter for the course of instruction for the Schools Associateship (*i.e.*, to specialise in one or other of the four Schools) must state the School to which he desires to be admitted. His application, with the required works, where exemption is not given from this requirement (*see* § 5), must be submitted a fortnight before the end of each term or half term, or in the case of candidates wishing to enter the College in October who are unable to submit the works earlier, three weeks before the beginning of the session.

For the School of Architecture.

(a) The works to be submitted by a candidate are five drawings, half double-elephant size, as follows:—

(1) and (2). Examples of two of the Greek and Roman orders of Architecture. Each drawing should have two columns of one order complete, the columns being not less than 10 inches high, with details three times the scale of the column, and diagrams showing the application of the drawing to the whole building.

(3). A drawing of classic detail from the round, shaded.

(4) and (5). Two sheets of measured drawings of an existing building or portion of a building.

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(b) Candidates who have had works accepted for the Art Class Teacher's or Art Master's Certificates, or who have obtained awards in the National Competition for work in subjects similar to those required, will not be called on to submit works in those subjects. Candidates wishing to take advantage of this privilege should submit with their applications a list of the successes they have obtained.

(c) The examination or test of the candidate at the College consists of making a drawing, to be plotted on the spot, from measurement, and executed in six days, of some architectural object in the Victoria and Albert Museum selected for the purpose.

Time allowed : 6 days.

(d) Candidates who have passed one of the Board's Art Examinations in 1913 or 1914, or have obtained 1st class successes at Examinations prior to 1913, in subjects similar to those required, will not be called on to enter for examination in those subjects. Candidates wishing to take advantage of this privilege should submit with their applications a list of the successes they have obtained.

Candidates who have sat for Examination in 1914 and failed, may apply to have the work done by them at the Examination considered and a decision given as to whether they may be exempted from any part of the test.

For the School of Ornament and Design.

(a) The works to be submitted by a candidate are :—

- (1) Six drawings from nature or architecture, of which at least two must be very careful pencil drawings of flowers and foliage.
- (2) A sheet of lettering done from good Roman capitals.

(b) Candidates who have had works accepted for the Art Class Teacher's or Art Master's Certificates, or who have obtained awards in the National Competition for work in subjects similar to those required, will not be called on to submit works in those subjects. Candidates wishing to take advantage of this privilege should submit with their applications a list of the successes they have obtained.

(c) The examination or test of the candidate at the College consists of :—

- (1) Drawing from a cast in pencil.
- (2) Lettering by hand of a given sentence.
- (3) Drawing from memory some piece of common foliage such as that of the oak, ash, or lime.
- (4) A simple problem in design.

Time allowed : 3 days.

(d) Candidates who have passed one of the Board's Art Examinations in 1913 or 1914, or have obtained 1st class successes at Examinations prior to 1913, in subjects similar to those

required, will not be called on to enter for examination in those subjects. Candidates wishing to take advantage of this privilege should submit with their applications a list of the successes they have obtained.

Candidates who have sat for Examination in 1914 and failed, may apply to have the work done by them at the Examination considered and a decision given as to whether they may be exempted from any part of the test.

For the School of Decorative Painting.

(a) The works to be submitted by a candidate are:—

- (1) *A painting of a nude figure from the life, not less than 24 ins. high.*
- (2) *A drawing, in chalk or pencil, of a nude figure from the life, on an imperial sheet.*
- (3) *An anatomical drawing (bones and muscles) of the same figure.*

(b) Candidates who have had works accepted for the Art Class Teacher's or Art Master's Certificates, or who have obtained awards in the National Competition for work in subjects similar to those required, will not be called on to submit works in those subjects. Candidates wishing to take advantage of this privilege should submit with their applications a list of the successes they have obtained.

(c) The examination or test of the candidate at the College consists of:—

- (1) *A drawing of a figure from the nude, in chalk or pencil, on an imperial sheet.*
- (2) *A drawing of a head from the life, full size, in chalk or pencil.*

Time for each of these drawings, 6 hours.

(d) Candidates who have passed one of the Board's Art Examinations in 1913 or 1914, or have obtained 1st class successes at Examinations prior to 1913, in subjects similar to those required, will not be called on to enter for examination in those subjects. Candidates wishing to take advantage of this privilege should submit with their applications a list of the successes they have obtained.

Candidates who have sat for Examination in 1914 and failed, may apply to have the work done by them at the Examination considered and a decision given as to whether they may be exempted from any part of the test.

For the School of Sculpture and Modelling.

(a) The works to be submitted by a candidate are:—

- (1) *A drawing from the antique.*
- (2) *A drawing from life.*
- (3) *An anatomical rendering in pencil (bones and muscles) of No. (2).*

The above figures to be about one-third life dimensions.

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(b) Candidates who have had works accepted for the Art Class Teacher's or Art Master's Certificates, or who have obtained awards in the National Competition for work in subjects similar to those required, will not be called on to submit works in those subjects. Candidates wishing to take advantage of this privilege should submit with their applications a list of the successes they have obtained.

(c) The examination or test of the candidate at the College consists of:—

Modelling a bust from the antique.

Time allowed, 6 days.

(d) Candidates who have passed one of the Board's Art Examinations in 1913 or 1914, or have obtained 1st class successes at Examinations prior to 1913, in subjects similar to those required, will not be called on to enter for examination in those subjects. Candidates wishing to take advantage of this privilege should submit with their applications a list of the successes they have obtained.

Candidates who have sat for Examination in 1914 and failed, may apply to have the work done by them at the Examination considered and a decision given as to whether they may be exempted from any part of the test.

CONDITIONS OF GRANT OF FULL ASSOCIATESHIP.

11.—(a) In order to be entitled to the Full Associateship of the College students must:—

- (1) have studied in the College for at least six terms; have spent at least one term in each School of the College and have been not less than four terms in the Upper Division of one or more Schools of the College;
- (2) have obtained a First Class Certificate in the Upper Division of one of the Schools of the College, and either a First Class Certificate in the Lower Division or a Second Class Certificate in the Upper Division of each of the other three Schools;
- (3) have executed a composition for a given decorative subject to the satisfaction of the Visitors.

(b) The Full Associateship will also be granted to those students who have passed satisfactorily through at least two years' training in the College (or National Art Training School) before October, 1900; have obtained the Art Master's Certificate, Group I.; and Certificates for two other groups.

CONDITIONS OF GRANT OF SCHOOLS ASSOCIATESHIP.

12. In order to be entitled to the Schools Associateship of the College students must :—

- (1) have been at least four terms in the College; have spent one term in the School of Architecture, unless previously qualified in that subject (*see* note to § 4(b), page 5), and have been at least three terms in the Upper Division of the School in which they have specialised;
- (2) have passed satisfactorily through the introductory Course of Architecture, or have been exempted from that Course, and have obtained a first-class Certificate in the Upper Division of the School in which they have specialised;
- (3) have executed a composition for a given decorative subject to the satisfaction of the Visitors.

PRIVILEGES OF ASSOCIATES.

13—(a) *Students gaining the Full Associateship of the College are at present qualified for recognition as Principal Teachers of Schools of Art. But attention is called to the terms of Article 46 of the Board's Regulations for Technical Schools, Schools of Art, &c. (1914),* and students entering the College who contemplate becoming teachers should obtain the Board's Rules as to the issue of Teaching Certificates for Teachers of Art (Rules 109) referred to therein, and make themselves familiar with the conditions under which the Board will be prepared to endorse Diplomas of Full Associateship with Teaching Certificates.*

(b) *Students gaining the Full Associateship of the College are entitled to wear a hood and gown, and to use after their names the letters A.R.C.A. (London).*

(c) *Students gaining the Schools Associateship are entitled to wear a hood and gown, and to use after their names the*

* Extract from the Board's Regulations for Technical Schools, Schools of Art, &c., 1914, dealing with Principal Teacherships of Schools of Art.

46.—(a) *In order to be qualified for recognition as a Principal Teacher, a teacher must hold the Board's Teaching Certificate for Teachers of Art, or the Full Associateship of the Royal College of Art, or an Art Master's Certificate, (Group I.), or, in exceptional circumstances, such special qualification as the Board may recognise.*

(b) *The Full Associateship of the Royal College of Art will not be regarded as qualifying for recognition as a Principal Teacher a teacher whose Course at the College began in October, 1915, or later, unless such evidence of general education, physical fitness, and professional training has been produced to the Board, as is required by paragraphs 2 to 4 of Rules 109, and the Diploma of Associateship has been endorsed by the Board with a Teaching Certificate under the terms of paragraph 5 of those Rules.*

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letters A.R.C.A. (London), with the title of the School or Schools in which they have specialised, *e.g.*, A.R.C.A. (London, (Architecture)).

14. Applications for the Diploma of Associateship should be addressed to the Registrar, Royal College of Art, South Kensington, London, S.W.

SCHOOL OF ETCHING AND ENGRAVING AND CRAFT CLASSES.

15. Students of the Upper Division of a School will be selected for instruction in one or more of the following subjects or of such others as may, from time to time, be included in the work of the College:—Etching and Engraving, Stained Glass, Tile Painting and Pottery, Writing and Illuminating, Tapestry Weaving and Embroidery, Stone and Marble Carving, Furniture Decoration, Wood Carving and Gesso Work, Metal Work and Enamelling.

The primary object of the Craft Classes is to afford students an opportunity of becoming practically acquainted with the capabilities and limitations of the materials in which their designs would be carried out. Before entering any of these classes students must first obtain the permission of the Principal, and they must either be students in the related School of the College, or have already passed through that School.

16. The times when the Classes meet are posted in the College.

17. A limited number of persons other than students following the regular courses of instruction in the College may be admitted to these classes. Such special admission to single classes will be granted only to applicants recommended by the Principal as fully qualified for the class work and will be limited by the conditions under which the several classes are conducted. No external students can be admitted to the Metal Work and Enamelling class.

STUDIES IN THE VICTORIA AND ALBERT MUSEUM.

18. Groups of students will study at appointed times in the Victoria and Albert Museum, under the guidance of the Instructor of the Division in which they are working or of a Student Demonstrator.

TIMES OF STUDY AND VACATIONS.

19. The annual session consists of two terms:

The first term begins on Wednesday, October 7th 1914, and ends on Wednesday, February 17th 1915.

The second term begins on Thursday, February 18th, 1915, and ends on Friday, July 2nd, 1915.

The Christmas holidays begin on Thursday, December 17th, 1914, and end on Monday, January 4th, 1915, both days included.

The Easter holidays begin on Thursday, April 1st, 1915, and end on Thursday, April 15th, 1915, both days included.

20. The ordinary class hours are from 9.30 a.m. to 3.30 p.m. with an interval of one hour for lunch, and from 4 p.m. to 6 p.m.

21. Students are required to follow the courses of study laid down for them, and to attend the classes regularly.

22. A register of students' attendance is kept by the Registrar, and may be consulted by parents and guardians at his office. For further information application should be made to the Registrar, Royal College of Art, South Kensington, London, S.W.

Female students can obtain Board and Residence at Alexandra House. For terms apply:— The Secretary, Alexandra House, Kensington Gore, London, S.W.

COLLEGE EXAMINATIONS.

23. The work of the students is reviewed during each term, and the award of travelling scholarships and prizes is made at the end of each session by the Visitors on the work of the session. For all purposes the students' work will be judged by its general quality throughout the session.

AWARDS.

24. The following awards are tenable at the College during the session 1914-15:—

- (a) Royal Exhibitions;
- (b) National Scholarships;
- (c) Free Studentships;
- (d) Local Exhibitions.

25. Each Exhibition, Scholarship, and Studentship will be held on the condition that the holder's conduct and progress are satisfactory, and that he attends the approved course of instruction regularly, complies with all the rules, and passes the prescribed examinations.

26. A Royal Exhibition entitles the holder to an allowance of £60 a year for three years, and free admission to the lectures and instruction in the College approved for the Exhibitioner. As a student of the College, a Royal Exhibitioner may become eligible for the award of a Royal College of Art Scholarship.

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27. A National Scholarship entitles the holder to an allowance of £60 a year for three years, and free admission to lectures and one or more of the Craft Classes, and instruction in one of the Schools of the College, with such other supplementary instruction as may be approved for the Scholar. As a student of the College, a National Scholar may become eligible for the award of a Royal College of Art Scholarship.

28. A Free Studentship entitles the holder to free admission for two years to the lectures and instruction in one of the Schools of the College, with such other supplementary instruction as may be approved for the Student.

The Free Studentship may be renewed exceptionally for one or two years.

29. Local Exhibitions, to which the Local Education Authority or Managers contribute not less than £25, and the Board not more than £25, are tenable at the Royal College of Art, subject to the conditions of § 5 (b) above, for one year in the first instance. They may be renewed at the request of the Local Education Authority or Managers for a second and third year. The fees for instruction are remitted to Local Exhibitioners.

30. The holder of a Royal Exhibition or National Scholarship is allowed third-class railway fare between his home and London for one journey to and fro each session. Third-class railway fare is allowed by the Board for one journey to London to a Free Student upon taking up his Free Studentship.

31. Royal Exhibitioners and National Scholars may be required to assist in teaching in the College.

32. Information as to the conditions of award of these Scholarships, Exhibitions, and Studentships will be found in the Board's Interim Regulations for Scholarships, Exhibitions, etc., for 1914. A revised Scheme for awards may be brought into force in 1915 or later.

REWARDS TO STUDENTS OF THE COLLEGE.

SCHOLARSHIPS.

Royal College of Art Scholarships.

33. A limited number of Royal College of Art Scholarships at the rate of £60 a year with free admission to the classes of the College, may be awarded, subject to the following conditions. These Scholarships will be tenable for a term, but may be renewed for further terms. No renewal can be made to a student beyond the term in which he completes a period of five years' free tuition at the College. A Royal College of Art Scholar may be required to assist in the teaching at the College. A Royal College of Art Scholar is given, by the Board, third-class railway fare between his home and London for one journey to and fro each session. Subject to the sanction of the Board of

Education, these awards may be held concurrently with Scholarships or other aid granted by Local Education Authorities.

Students gaining Royal College of Art Scholarships cannot hold them concurrently with any other of the Board's Scholarships.

Students applying for these Scholarships must undertake to hold them throughout the term for which they are awarded.

Student Demonstratorships.

34. Two Student Demonstratorships of the value of 30s. a week may be awarded to Students who have taken the Full Associateship of the College and are in their fourth or fifth year. These Student Demonstratorships will carry free admission to the classes of the College and will be tenable in the first instance for not more than one term, but may be renewed for a second term. Students holding these Demonstratorships will be given by the Board third-class railway fare between their homes and London for one journey to and fro each Session. The holders of these awards will not be allowed to hold them concurrently with any of the Board's Scholarships or with Local Exhibitions, and will be required to devote about half their time to the performance of such teaching duties in the College as the Principal may from time to time arrange.

Students undertaking work outside College.

35. In their last term of attendance at the College, students in receipt of maintenance allowances, who are specialising in one or two of the Schools of the College, may be allowed to do their own work in the afternoons either in the College or outside and to take advantage of opportunities of establishing relations with manufacturers and others engaged in practical work. Application for permission to take advantage of this provision must be made in writing to the Registrar.

Travelling Scholarships.

36. A Travelling Scholarship of £65 may be awarded annually, on the recommendation of the Visitors, in the Upper Division of each School, to the best student who has been at least four terms in the College, has spent one term in the School of Architecture, unless previously qualified in that subject (see note to §4 (b), page 5) and has been at least three terms in the Upper Division of one or more Schools.

Holders of Travelling Scholarships will be required, as a rule, to travel during the whole of the second term of the session following that in which the award was made. In exceptional cases the Board may sanction a variation of this arrangement, if special application is made to them through

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the Principal at the beginning of the session following the award.

The payment of the Scholarship will be made by instalments, and the payment of any instalment may be dependent upon the production of satisfactory evidence that the Student has done good work while travelling for the purposes of the Scholarship.

The term during which the student is abroad will not count as a portion of the time during which he is entitled to hold a Scholarship or other corresponding privilege in the College.

A student cannot hold a Travelling Scholarship more than once.

Prizes.

37. Prizes may be awarded at the end of the Session to individual Students on the recommendation of the Visitors. The number and value of the prizes to be awarded in 1915 will be fixed subsequently.

Certificates of Merit.

38. Certificates of Merit (first and second class) may be awarded to students in the Upper or Lower Divisions on the recommendation of the Visitors and Staff of the College.

REGULATIONS TO BE OBSERVED BY STUDENTS.

39.—(1) All students must enter daily the times of their arrival and departure; books for this purpose are kept in the hall.

(2) Students are allowed from 12.30 to 1.30 p.m. for lunch, and no student may absent himself for a longer time or during College hours, without permission. Leave of absence for more than a day must be obtained in writing. Applications should be addressed to the Registrar.

(3) In case of absence from any cause a communication must be sent at once to the Registrar. When absence on account of illness exceeds two days, a medical certificate may be required, which must be sent to the Registrar, Royal College of Art, South Kensington, London, S.W.

(4) After absence, from illness or other cause, students must, on their return to the College, report themselves to the Registrar.

(5) Students who have been directed to work in the Victoria and Albert Museum or other places will be given a written authority which must be left with the Attendant at the entrance of the College, and students are required to have their College Ticket with them to show in the Museum on demand.

(6) No student is allowed to remain in the College after working hours.

(7) All applications for special leave must be made in writing to the Registrar.

(8) No student may hold any teaching post outside the College, or accept any occasional teaching work, or enter for any outside examination or competition, without first obtaining the consent of the Principal.

(9) No student may prepare or enter for any Examination, other than those forming part of his College course, or submit works for any Exhibition, without first obtaining the consent of the Principal.

(10) Any student who proposes to marry during his course at the College, must give notice of his intention in advance to the Principal.

(11) Each student must record his address, on the first day of term at latest, in the Register provided by the Registrar, and immediate notice of changes of address must be given to the Registrar in writing. The place of residence is subject to the approval of the College Authorities.

(12) Each student on registration will be handed a ticket of admission, which must be produced when required. If a ticket is lost, the Registrar should at once be informed in writing, when a Pass will be issued.

(13) The Board cannot be responsible for the custody of the private property of students, nor can any claim be entertained in respect of any articles that may be left in the College. Each student is provided with a locker for which a padlock and key may be supplied by the student.

(14) It is the duty of all students to read and comply with the Prospectus as annually revised and any official notices which may be posted in the College.

(15) Communications to the Royal College of Art should be addressed to

The Registrar,
Royal College of Art,
South Kensington,
London, S.W.

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SYLLABUS
OF
THE COURSES OF INSTRUCTION
OF
THE ROYAL COLLEGE OF ART.

SESSION 1914-15.

ARCHITECTURAL COURSE.

Professor—A. BERESFORD PITE, F.R.I.B.A.

Assistant Instructor—A. E. MARTIN, A.R.C.A. (London).

The Architectural School consists of a Lower and of an Upper Division.

The Lower Division provides a general architectural course adapted for all students entering the College, unless previously qualified in the subject, and usually extends to one term only.

The Upper Division is divided into two sections:—

- (1) the ordinary course which is adapted for general students who desire to continue the study of architectural design; and
- (2) the advanced course which is undertaken by specialised students who propose to become teachers, architects, or workers in the building crafts.

Students intending to specialise in architecture, are advised to undertake the Lower Division course of study before entering upon the courses of the Upper Division.

The ordinary and advanced courses of the Upper Division are available for students who, having taken the Lower Division course on entering, afterwards specialised in one of the other schools of the College.

The following syllabus is varied in subjects and detail each year, but the courses and methods of study indicated are generally adhered to.

Advanced students in the Upper Division undertake special studies, other than those set forth in the Syllabus, as approved by the Professor.

LOWER DIVISION.

The course for the First Term includes the following syllabus of English Woodwork and Masonry, and of Greek and Italian Renaissance Architecture.

English Woodwork.

I. Measured drawings of objects in the Victoria and Albert Museum:—

- (a) Small scale studies, forming a series illustrative of the historical development of framing and of the employment of mouldings and carved ornaments.
- (b) Full size working drawing, suitable for a practical workman, of one example in the Museum.

II. Lectures with lantern photographic illustrations will be given on the historical development of woodwork ornament.

III. Series of studies from photographs and plates of ancient examples of internal treatment of rooms, &c.

IV. A subject in design based upon the foregoing studies will be given, *e.g.*, the panelling and fitting up of a portion of a modern building, with working and detailed drawings, full size mouldings and carving.

English Mediæval Masonry.

I. Course of lectures on English Mediæval Masonry, illustrated by lantern photographs, dealing with the development of ecclesiastical buildings from the Saxon till the Tudor period; and especially with vaulting and the progress of craftsmanship as illustrated in mouldings and carving.

II. Series of geometrical sketches from published drawings of ancient examples.

III. Visits to examples of Mediæval Building in and near London, and to selected modern churches.

IV. Full size templates of pier mouldings including archivolts and vaulting ribs.

V. Subject in design based upon the foregoing studies for some portion of an ecclesiastical building including a vault. Drawn to one-half inch scale with the vaulting geometrically projected, and with the mouldings and springer full size.

Greek Architecture.

I. Course of lectures on the development of Greek Architecture in Asia and Europe, and on the buildings of the Acropolis at Athens, illustrated by lantern photographs and diagrams.

II. Small studies of the proportions of the Doric and Ionic orders, accompanied by full size sections of mouldings.

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III. Visits to the British Museum and to buildings in London of the early nineteenth century in the Grecian style.

IV. Subject in design illustrating the picturesque effect of symmetrical treatment, *e.g.*, in columnar architecture in perspective.

Italian Renaissance.

I. Course of lectures on the work of the architects of Florence and Northern Italy in the fifteenth and sixteenth centuries, *i.e.*, from the completion of the Duomo at Florence to that of St. Peter's, Rome, with lantern photographs and diagrams.

II. Series of geometrical sketches from plans and photographs of the development of civil buildings.

III. Measured drawings and sketches from casts and objects in the Victoria and Albert Museum illustrating the development of Renaissance ornament and the employment of sculpture in conjunction with architectural forms.

IV. Subject in design based upon a phase of the Renaissance or upon the work of a master, involving the treatment of ornament for a monument, fountain, pulpit, &c.

V. Copy studies of selected examples of coloured decoration of the Early Renaissance.

UPPER DIVISION.

Ordinary Course.

This course consists of the detailed design of one or more subjects, with a series of precedents.

The subjects illustrate the combination of Architecture with Colour Decoration and Sculpture.

Careful measured Studies of Greek Marbles in the British Museum, and of other ancient examples are undertaken by students in this course as special subjects.

Visits are paid to buildings illustrative of the subjects under study, and outdoor sketching is undertaken on these occasions.

A syllabus of the principal subjects for design is prepared for each term; among these have been included:—

A Pavilion for an International Exhibition, with an open loggia decorated in colour.

The decoration of the Sanctuary of an Italian Renaissance Church.

A Club House for a country town, with ornamental plaster ceilings and panelled staircase.

A Town Mansion, with Hall, Staircase, and Drawing-room decorated in colour.

A public Square, with Fountain.

The detailed syllabus of one term's subject is set out below to illustrate the course of study.

Domed Architecture :—

I. Course of lectures on the progress of domed building from Roman to Byzantine, and to the Renaissance, illustrated with lantern photographs and diagrams.

II. Series of small scale studies, dated and noted, with part plan elevation and section of each, from drawings and photographs :—

(a) *Roman* :—

Pantheon, Rome.

Baths of Gallienus, Rome.

(b) *Byzantine* :—

St. Sophia, Constantinople.

St. Mark, Venice.

(c) *Renaissance* :—

Duomo, Florence.

St. Peter, Rome.

St. Paul, London.

Pantheon, Paris.

III. Subject for design involving the use of a dome, as a cemetery chapel in a campo santo, or a church in a tropical climate. The style to be some phase of Christian architecture, e.g., Romanesque or Early Christian, comprising a decorative scheme in mosaic or fresco :—

(a) Working drawings to small scale and perspective sketch.

(b) Larger detail of a portion of the Chapel.

(c) Small scale scheme showing colour treatment in fresco or mosaic, without figures or ornamental details.

(d) Complementary to above: colour scheme, including figure compositions, &c.

(e) Ornamental details in colour.

Advanced Course.

As in the ordinary course of this Division, the subjects proposed to the advanced students include architectural design in combination with the allied arts of Decorative Painting and Sculpture, and in conjunction with the handicrafts of Ornamental Wood and Metal Work.

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One subject is selected each session; the first term is devoted to preliminary designs and to the study of precedents, the architectural and technical aspects of the design being first considered; the second term's work is the study and design of the decorative portions of the subject, the preparation and completion of working and detail drawings that would be required for the due execution of the proposed work.

Among the subjects dealt with have been :—

A Town Church in the Renaissance manner decorated in colour.

A College Chapel in the English Mediæval manner with stallwork and vaulting fully detailed.

A Country Residence for a Prince as a subject in Domestic Architecture.

A Naval Monument for St. Paul's Cathedral.

The syllabus of the studies for the latter design is set out below to indicate the course of study in the subject of the combination of sculpture and architecture.

The outline syllabus for the study of Colour Decoration and Architecture, and the general syllabus of English Domestic Architecture are also added.

SCULPTURE AND ARCHITECTURE.

I. Series of historical studies made from casts and marbles in the Victoria and Albert and British Museums of the employment of sculpture in architecture: illustrating position and purpose of sculpture as well as character, with plans and elevations.

Greek.

(a) Pediment and Frieze, *e.g.*, figures enclosed by architecture. Parthenon and Theseum.

(b) Tomb steles. Low relief free figures. Tower of the Winds. Pergamos.

(c) Detached figures. Monuments. The Mausolus quadriga. Nike of Samothrace.

(d) Figures attached to architecture. Caryatids. Erechtheum.

(e) Decorated columns and pedestals, *e.g.*, Ephesus.

Romanesque and early Mediæval.

Studies in Victoria and Albert Museum and from photographs and drawings in the Library :—

(a) Portal, Cathedral Santiago di Compostella, from cast in the Victoria and Albert Museum.

(b) Portal, Moissac. Beaulieu.

(c) Caryatid Piers, St. Trophime, Arles.

(d) Friezes on lintels. St. Trophime, St. Giles, St. Martin, Tarascon.

- (e) Free use on elevations. Poitiers. St. Jouin de Marne.
 (f) Employment in panels.
 St. Amande de Boixe. Selles sur Cher. Dax.
 St. Paul de Varax.

Medieval.

From casts in the Victoria and Albert Museum :—

- (a) Figure of Christ from the Portal of Amiens, and key diagram of position.
 Three sets of figures from Auxerre, and key.
 Group from St. Sebald's Church, Nuremberg, by Adam Kraft, and key sketch.

Studies from photographs and drawings :—

- (b) Scheme of West Front, Wells Cathedral.
 Interior South Transept, Westminster Abbey.
 Angel Choir, Lincoln Cathedral.
 (c) Distribution of sculpture and schemes.
 Porches, Chartres Cathedral. Notre Dame, Paris,
 West Front. St. Pierre sous Vezelay. The Abbey,
 Vezelay.

Renaissance.

Series of studies from casts in the Victoria and Albert Museum, sketch elevations and plans.

Italian Pre-Renaissance.

School of Pisani.
 Pisa; Baptistery pulpit. Cathedral pulpit.
 Milan; shrine of St. Peter Martyr.

Cinque Cento.

- (a) Ghiberti. Florence Baptistery, north and east gates.
 (b) Donatello. Annunciation from S. Croce Florence.
 (c) Mino da Fiesole and Sansovino.

Michael Angelo.

Studies of composition :—

- (a) Sistine Chapel, frescoes, groups.
 (b) Medici Tombs, Florence.
 (c) Bronze panel.

II. Series of sketch designs in historic styles.

A mausoleum.

The entrance to a Campo Santo.

III. Design for a monumental tomb in St. Paul's Cathedral, commemorating a hero. Small scale sketches, working drawings, large scale details, perspectives or models, the arrangement of sculpture being fully designed.

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ENGLISH DOMESTIC ARCHITECTURE.

I. Course of lectures on the historical development of house planning in England.

II. Studies made from illustrations of examples :—

- (a) Prior to Elizabethan.
- (b) Elizabethan and Jacobean.
- (c) The works of Inigo Jones and Wren, and until Chambers.
- (d) The Victorian revivals.

Plans and sketch elevations with characteristic details.

Position of gardens, names of rooms. Notes as to date, locality, and materials.

III. Exercises in design in the manner of the first three periods mentioned above.

IV. Design for a modern residence with working drawings, and some portion fully detailed for wood or stonework.

V. Internal decoration of hall or drawing room in colour.

COLOUR DECORATION OF ARCHITECTURE.

I. Series of studies copied from drawings in the Art Library, and sketches from models in the Museum : to illustrate rise of the Renaissance School.

II. Analytical notes of each example giving some particulars of architectural situation and treatment, and of the system of colour decoration and ornament.

III. Preparation of design for treatment in colour of a portion of a Renaissance monument or building, *e.g.*, The Sanctuary of Sta. Chiara, Florence : in the Victoria and Albert Museum.

IV. Large scale details of coloured ornament.

V. Employment of coloured materials constructively and for surface enrichment.

VI. Mediæval colour decoration, studies of decorated reredoses and other objects in the Museum.

Students in the Advanced Course undertake special surveys of ancient monuments as complete records, and archaeological restorations of Greek buildings.

Full size cartoons have been prepared of the order of the Mausoleum at Halicarnassos with a small scale restoration.

Diagram, one-eighth full size, of the order of the Parthenon.

Complete surveys of important buildings abroad are made by the travelling students of this school, and are worked out and completed in the College; among these have been:—

The Pazzi Chapel, Florence.
The decorated Church at Saronno near Milan.
The domed Church at Montepulciano.
The Massimi Palace at Rome.

Among English monuments that have been surveyed and drawn are:—

All Hallows Church, Lombard Street, with its fittings of metal, marble, and carved wood-work.
The Abbey of Christchurch, Hampshire.

Complete ground plan survey of Westminster Abbey to a large scale.

MODELLING AND SCULPTURE COURSE.

Professor—EDOARD LANTÉRI.

Assistant Instructor—BENJAMIN CLEMENS.

LOWER DIVISION COURSE.

First Year—First and Second Terms.

Features of the face. Hands, feet of casts from life. Bust from the antique.

Second Year—First and Second Terms.

Figure from the antique. Anatomy of this study. Study of casts from life—torso, arm, leg, &c. Studies of plants.

Ornamental adaptation of the study; and study of carved and modelled ornament in relation to its place in architecture.

UPPER DIVISION COURSE.

Third Year—First and Second Terms.

Bust from life. Figure from life.

Composition: figure and ornament in the round and to fill architectural spaces.

A subject will be given every three weeks, and students' work thereon criticised.

During the third year course the following lectures and demonstrations will be given on—

1. The bust from life.

Armature. Building up of a bust in clay. Measurements. Division of forms in the face.

Practical modelling demonstration.

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2: The figure from life.

First Lecture — Armature. Pose of the figure. Chief lines. Contrast of lines. Contrast of surfaces. Scale of proportions. Measurements. First practical modelling demonstration.

Second Lecture.—Osteological construction of the figure. Influence of osteology on the superficial forms.

Second practical modelling demonstration.

Third Lecture. — Central points of radiation in Myology. Variety of character of forms. Spaces of rest between each mass. A few comparative proportions.

Third practical modelling demonstration.

Fourth Year—First Term.

Modelling from life, in the round and in relief. Modelling of folds. Arrangement of draperies in the round and in relief. Figure design and ornament. Sketch subject every three weeks. Marble carving (ornament). Comparative anatomy.

During the fourth year course the following lectures and demonstrations will be given:—

1. Relief. Relief is an interpretation of nature. Projections must vary according to their surroundings. How relief must be treated in a study. Superposition of surfaces in the contours. High relief. Half relief. Low relief.

Practical modelling demonstration.

2. Folds of drapery. Characteristic points of the fold. Direction of surfaces of folds.

Practical modelling demonstration.

3. Arrangement of drapery on cast or lay figure. Drapery must contribute to explain the movement of the figure. Chief line of drapery. Masses of folds. Points of radiation of folds. Points of rest between each mass.

Practical demonstration on the arrangement of drapery on casts.

Demonstrations will be given of an arrangement of drapery in high relief, modelled in clay; or the same arrangement in *low relief*; and of figure and ornamental design for architecture and art manufacture—Medallions, medals, plaques, etc., Marble carving (pointing).

Fifth Year—First and Second Terms.

Studies from life, *life size*. Studies of arrangements of draperies from life. Studies of animals. Figure and ornamental design, *full size*. Special subject given and criticised every six weeks. Carving in marble (figure). Enlargement of figure by

pointing. General studies of antique sculpture : figure, drapery and composition.

Practical modelling demonstration of arrangement of draperies from life.

Practical demonstration of enlargement of figure.

Occasional practical demonstrations will be given on casting :—

1. Waste mould.
2. Gelatine mould.
3. Piece mould.
4. Piece mould in clay.
5. Clay squeezed into piece mould.
6. Casting from life.

DESIGN AND CRAFTS COURSE.

Professor—W. R. LETHABY, F.S.A., F.R.I.B.A.

Assistant Instructor—E. W. TRISTRAM, A.R.C.A. (Design).

In the school of Design and Crafts practical workmanship in different classes is taken concurrently with the general drawing work of the studio, and every advanced student of design will be expected to make himself proficient in the technique of one craft.

Craft classes are already established in Etching and Engraving, Stained Glass, Pottery, Writing and Illumination, Embroidery and Tapestry Weaving, Marble and Stone Carving, Furniture and Gesso Work, Metal Work, and Enamelling.

The course of study in the studio and the museums is given below, but it must be taken as suggesting the scope of study rather than as a plan to be followed in exact sequence.

Every student of design will be required to make a series of *careful* studies in the museums; these should as far as possible be uniform in size for ready reference.

All advanced students of Design will be expected to specialise their studies with a view to perfecting themselves in one branch of art and coming into touch with special forms of industry, and with that object they may be required to attend the demonstrations of the Craft Classes and to engage in practical work of a certain number of subjects. Such special knowledge will be equally valuable to the teacher and the designer.

The following subdivisions are suggested, but there may be some interchange of studies :—

- I. Decoration, stained glass, mosaic, tapestry, etc., involving figure composition.
- II. Cabinet work, house decoration, pattern painting, stencils.
- III. Pottery and porcelain design, majolica, etc.

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- IV. (a) Printed stuffs, wall papers, etc.; (b) textiles, embroidery, lace, carpets, and damasks.
- V. Gold and silversmiths' work, jewellery, enamelling, etc.
- VI. Modelled and carved ornament, in stone, wood and plaster, gesso work and gilding.
- VII. The book and its decoration, illustrations, borders, type, initials, title pages; illumination and lettering, wood engraving, photographic reproduction, lithography, etching; bookbinding, cloth covers.
- VIII. Metal work in wrought and cast iron, lead, brass, etc.

LOWER DIVISION COURSE.

First Year.

An introductory course in design, based on the following syllabus, will be taken in the first year's work in the Designing School, and special attention will be given to the following subjects as preliminary to the full course.

Copying of fine examples of ornamental drawing and design. Drawing from casts of selected ornament in pencil and pen and with the brush. Drawing to a large scale on dark paper in chalk. Memory drawing of flowers, etc.

Brush work in symmetrical patterns, making the most of the characteristic strokes of the brush. The same, translating natural forms into free brush work and arranging them to fill given spaces.

Studies from Nature to be very carefully made from flowers foliage, butterflies, shells, wings and other common and natural objects, and from photographs. Structure to be specially observed and refinement of drawing aimed at.

Second Year.

Same work continued.

Brush work applied to pottery painting and similar forms of design.

Studies from Nature to include reference to botanical and natural history books, old herbals, etc.

Black and White copying of fine examples of illustration, and engraving, studies from flowers and other objects in pen and ink.

Conditions of Pattern Design. Repeats as in a frieze, or every way as in a wall paper; usual sizes of repeats in printed and woven stuffs.

Development of Pattern Design, spaces divided into strips and meshes; counter-changing of black and white spaces, powderings.

Lettering in pen and brush work copied from fine examples.

Study of old examples in museum, making careful drawings of objects selected by the Professor.

Designing: simple exercises.

Students may join the Craft Classes by special permission.

UPPER DIVISION COURSE.

Third Year.

Same work continued, but with more special application to one of the branches of Design. Students will join one of the Craft Classes.

Studies from Nature, birds and animals to be studied in Natural History Museum.

Life and costume.

Black and White, objects in the museums, draperies, etc., to be studied in pen and ink.

Mechanical Conditions of Design, materials and methods of production.

Development of Pattern Design, sprigs, scroll patterns, knot work and labyrinthine patterns, borders, crestings, etc., showing how these elements apply to different materials.

Lettering, etc., text writing, ornamental initials, and decorative pages, illumination, proper place of type on the page.

Study of old examples in the Museum, mainly illustrative of the special branch of Design selected by the student.

Literature of Art, work in library, history of selected branch of Art.

Original Design, subjects to be worked out in consultation with the Professor.

Fourth Year.

Same work continued.

Museum Studies, with special relation to aptitudes and limitations of given materials and the historic development of crafts.

Figure Composition for given situations and materials.

Heraldry: study of the principles of, and practice of a good type of heraldic drawing.

Lettering. Inscriptions in given materials, on scrolls, monograms, cyphers, etc.

Symbolism, etc.: introduction to, and other accessory material for design, badges, insignia, ships, flags, crowns, armour, the zodiac.

Original Designs.

Fifth Year.

Original designing and craftsmanship in Craft Classes.

As far as possible students of the fifth year will be afforded facilities for getting into touch with manufacturers.

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MURAL AND DECORATIVE PAINTING COURSE.

Professor—GERALD E. MOIRA.

Instructor—E. C. ALSTON.

Assistant—G. R. WOOLWAY, A.R.C.A. (London).

In the School of Mural and Decorative Painting, composition of a decorative character is the principal feature of the course. Every student is required to follow the course except in instances where the work of a student justifies more rapid advancement.

Every composition is considered and executed with due regard to its fitness as an architectural decoration, and the scale of figures in relation to the space for which they are intended to decorate is made a particular feature of this work.

In such compositions, each student is required to select and pose his model, and also all arrangements of drapery, thus equipping the student to carry out any decorative work in after life, and also to give a sound training in the management of a school.

Studies from life are painted in the Upper Division in tempera, oil or paraffin wax, only at such times as the Professor may deem it necessary.

LOWER DIVISION COURSE.

First Year—First Term.

Antique School.—Five hour studies from the antique in charcoal for the purpose of training the student to see proportion, construction, and action. Studies to be not less than Imperial size.

Drawing of details from the life. Heads and hands: life size in charcoal or point.

First Year—Second Term.

Drawing from the antique in charcoal or point: Imperial size. Time allowed, three days.

Painting of a head from the antique in colour. Full size. Six days allowed.

Drawing of a head from the life in charcoal or point. Life size.

Second Year—First Term.

Painting of a figure from the antique in colour. Figure not to be less than 24 inches. Eight days allowed.

Painting of a head from the life in colour. Life size. Six days allowed.

Second Year—Second Term.

Painting of a head from the life in colour. Life size.
Eight days allowed.

Figure composition: the elementary principles of design.
Two or three days allowed.

UPPER DIVISION COURSE.

Third Year—First Term.

Figure composition: studies from life and drapery for same. These studies to be arranged by the student under the supervision of the Professor.

Third Year—Second Term.

Similar to first term, with a cartoon of the composition. This latter to be carried out full or half full size.

Fourth Year—First Term.

Drawing and painting from the life. The figure to be posed for eight days, from which a painting will be executed in oil or tempera.

The subject of the figure composition will be announced. Four days will be allowed for the composition, the dimensions of which will be given and its intended position stated; so that no composition will be executed without due regard being given to its fitness as an architectural decoration, and especially the scale of figures in relation to the spaces for which they are intended.

These compositions will be executed in charcoal, and the most successful will be carried out in colour with a medium selected by the Professor, which may be tempera, oil, or paraffin wax.

Studies in drapery to be executed in charcoal or colour, at the discretion of the Professor. Disposition of the folds to be arranged by the students under the direction of the Professor.

Fourth Year—Second Term.

The work of this term will be a continuation of the above, and according to the progress made by the students and their ability to cope with the composition of important subjects; so the time for this work will be extended.

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Fifth Year—First and Second Terms.

Drawing and painting the figure. Students in this year will be required to undertake larger schemes of mural decoration, and with this end in view will be required to colour their cartoons, which may be their own designs, with a view to their execution in some definite material. The students may be required to assist in carrying out large schemes of decoration in the whole or part of a building, and must be prepared to work in various media.

At the 4 o'clock class meetings life studies from the nude will be executed in charcoal or point—time allowed, two hours.

ETCHING AND ENGRAVING SCHOOL COURSE.

Professor—Sir FRANK SHORT, R.A., P.R.E.

Assistant—Miss POTT, R.E., A.R.C.A. (London).

Students in this School are required to work practically at one or more of the following methods of engraving, viz.:—

Etching.

Aquatint engraving.

Line engraving.

Mezzotint engraving.

Steel-facing and plate printing.

Tools and materials are provided.

COURSE ON METHODS OF TEACHING.

The Principal and Head Master—A. SPENCER, A.R.C.A. (London).

The instruction given in methods of teaching will relate to the art instruction recognised by the Board of Education as given in Schools of Art. The period of training in the methods of teaching will spread over the whole course of a student's college career, and is intended to fit the student, on leaving to become a teacher, to grapple with the various points that may arise in dealing generally with Art instruction as above described.

Students who enter the College with the intention of becoming teachers will be required to attend lectures given by the Principal.

The lectures will treat of the following subjects:—

I. The history of Drawing as a means of education: the work of Rousseau, Pestalozzi, Froebel.

II. The necessity for the Art Master making himself acquainted with the system upon which pupils have been taught before entering the School of Art—

(a) The methods pursued in the Elementary and Secondary Schools:

- (b) The Drawing the child has done from 7 years of age to 12, and between the age of 12 and his entering the School of Art.

III. Review of the subjects taught in Schools of Art and examined by the Board :—

- (a) Division of the teaching between lectures, class work, and individual instruction.
- (b) The Life Class : not an end in itself ; its relation to other branches of work.
- (c) The limitations of paper work and the beginning of craft work.
- (d) Craft Classes : their relation to the classes for design, the general work of the School, and to manufactures.
- (e) The mistake of neglecting general education in the Art Student.

IV. An analysis of the system of instruction in the Royal College of Art.

V. School Management :—

- (a) Furniture, fittings, &c.
- (b) Arrangement of class rooms, casts, school museum, library, photographs, &c.
- (c) The Head Master : his duties to his Committee, his staff and his students.
- (d) Necessity for the staff continuing their studies, or practising some special branch of art.
- (e) Schools of Art and their influence—
 - (a) on the locality generally ;
 - (b) on manufactures and industry.
- (f) The relations between Schools of Art, Technical Schools, and Art Classes.

VI. Foreign methods compared : Primary and Secondary Schools, and Schools of Art in France, Germany, and Austria-Hungary. The École des Beaux Arts and the École des Arts Décoratifs et d'Art Industriel, Paris, and their influence.

As part of their training, students who follow this Course will also give instruction in the College and elsewhere under the direction of the Principal. According to their various years they will be required to give demonstrations either on paper or on the blackboard ; and, in order to prepare them for this work, the Principal will give instruction four times a week on Methods of Teaching.

Students attending this Course will visit the Zoological Gardens one evening a week during the summer months for the purpose of obtaining practice in the drawing of animals.

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The Instructor responsible for the meetings from 4 to 6 o'clock will be assisted by the Senior Students in taking charge of the Life and Antique Classes, according to their years. The pose of the model, and the antique figures to be drawn, will be decided upon at a morning lesson, when the work also will be arranged for the 4 to 6 o'clock meetings of the following week. The student in charge will be required to give a demonstration before the class, and in presence of the Principal, of his method of commencing a figure and of carrying it through to the blocking in of the broad masses of shadow.

HISTORICAL LECTURES.

Lecturer—BECKWITH A. SPENCER, M.A., F.S.A.

The general history of Art is dealt with in a four years' course of lectures, which is divided into the following periods:—

- I.—(a) Pre-historic Art.
 - (b) The Art of Egypt, Chaldæa and Persia.
 - (c) Outlines of Greek History to 146 B.C.
 - (d) Greek Mythology. The Iliad, Odyssey, Hesiod.
 - (e) Greek Sculpture, Architecture, Vases, Coins, &c.
- II.—(a) Outlines of Roman History to 476 A.D.
 - (b) Roman Architecture, Sculpture, and Painting.
 - (c) Early Christian Art.
 - (d) Outlines of Mediæval European History from the 5th to the 13th century.
 - (e) Byzantine Architecture.
 - (f) Mosaics.
 - (g) Mohammedan Architecture.
 - (h) Irish, Saxon, and German Illuminated MSS.
 - (i) Romanesque and Gothic Architecture.
 - (j) Romanesque and Gothic Sculpture.
- III.—(a) The Renaissance in Italy.
 - (b) The Schools of Siena, Florence, Umbria, Venice, North Italy, and Rome.
 - (c) Architecture and Sculpture.
 - (d) Mural Decoration.
 - (e) Later Italian Painting and the Spanish School.
- IV.—(a) The Renaissance in Germany, in France, and in Flanders.
 - (b) Art in the Netherlands in the 16th century.
 - (c) French Art in the 17th and 18th centuries.
 - (d) English Art up to the 17th century.
 - (e) England in the 18th century: Painting, Engraving, Furniture, Silver, &c.
 - (f) The Industrial Revolution of the 19th century and its effects.
 - (g) Modern problems and tendencies.

All students in the College are required to attend the lectures to write essays on various subjects connected with them, and to attend the classes held by the lecturer for the discussion of the subject-matter of the lectures and for the revision of the students' notes.

Occasional lectures are also delivered on Crafts with special reference to the collections in the Victoria and Albert Museum, and on Costume, Armour, &c.

Every student of the College is expected to execute a pictorial or decorative Figure Composition once a month as home-work; the subjects are selected from the literature of the period which is being studied in the lectures. The compositions will be hung in order of merit, and criticised by the Professor of Painting and Mural Decoration.

FOREIGN LANGUAGES.

Classes in French and Italian are held by Mr. B. A. Spencer for students desiring to attend them.

STAINED GLASS COURSE.

Teacher—KARL PARSONS.

The students being already trained draughtsmen and painters, the teaching is mainly directed towards the acquirement of a knowledge of the craft, and especially of craft limitations as affecting design and execution.

The actual technique of painting and lead-working are therefore taught in the ordinary class lessons, and the direction and application of them in the special weekly lecture or demonstration.

In General.

The past history and place of Stained Glass in the Architectural Arts. The present conditions under which it is produced. Apprenticeship. Subdivision of labour. The possibilities of employment. The uniting of design and execution. Architectural fitness. Poetic and imaginative fitness.

In Detail.

Stained Glass essentially an art of the Middle Age. The Gothic revival—its effects—its defects—its present influence. The revival of craft—the master craftsman—his present position and opportunities—technical knowledge, perfection of each branch of it in modern work, but subdivided. The separation of design from execution—their reuniting in Art and Craft. Technical education,

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Practical.

Glass—its nature and varieties—cutting and lead working. Working drawings and their preparation—tracing—painting—choice of glasses, colour, ornament. The importance of a special class of ornament limited by the craft as a right surrounding for figure work. Spacing, division of spaces. "Quarries," and their ornament. Diaper, "Canopy," or "Tabernacle" work. Reference to Architecture and to Nature. Suggestions from Nature and tradition—value of the latter—how to use it, and how far. Sketching for glass. Sketching to scale in glass itself. Cartoons. Composition. Imagination. Sacred History. Symbolism. Course of reading—list of books. Vestments and accessories—how to make them for studio use. Archæological correctness—its importance in church work.

POTTERY COURSE.

Teacher—RICHARD LUNN.

The object of this class is to illustrate in a simple and inexpensive manner principles and facts relating to the making and decorating of Pottery—enabling students to design, make shapes, and decorate them, with a knowledge of the requirements for this important industry.

The following are some of the processes which will be taken :—

In the First Course.

Materials—Composition of body or paste. Clays and their contractions.

Making tiles—Plain, embossed, raised outline, and inlaid.

Plates, cups and saucers, bowls, etc., made by throwing on kick wheel, jigger and jolley.

Shapes turned in plaster of Paris upon the lathe, and moulded.

Mould making.

Ware made by pressing into moulds, and by casting with slip—Figure moulding and making.

Dip Ware—Slip painting.

Placing in biscuit kiln, and firing.

Second Course.

Decoration by painting with underglaze colours, and by filling in raised outlines with coloured glazes, by sgraffito, and by incising—ground laying.

Hardening—Glazing, and placing in glaze kiln.

Firing glazed ware.

Decoration by painting in overglaze, or enamel colours, and lustres.

Placing in enamel kiln, and firing.

Della-Robbia ware—Majolica.

Oriental tiles and shapes, showing their method of production.

WRITING AND ILLUMINATION COURSE.

Teacher—EDWARD JOHNSTON.

- a. The acquiring of a formal hand (founded on early writings).

This gives an insight into the construction of letters, and indicates how new forms may be designed, the pen being essentially a letter-making tool, and writing the medium by which nearly all forms of letters have been evolved.

- b. The practical application of writing.

This inculcates right methods in the spacing, arrangement and combination of Letters and masses of Lettering, *e.g.*, in addresses, books, poems, and other MSS. and in "bill heads," book plates, "black and white work," title pages, "book decoration" and other printed matter: also in stone, metal and woodwork, and in handicrafts generally.

- c. Theory of Lettering.

The principles underlying the construction and arrangement of good lettering, arrived at, analytically, by the study of old MSS. and inscriptions, and, synthetically, by the practice of writing.

Minuscule (small letters) and Majuscule (capitals) Roman, Uncial, Irish, Gothic and Italic forms.

Modification of forms to suit different processes and materials, *e.g.*, stone and metal engraving, wood-carving, pen versus brush work.

- d. Gold-laying and burnishing in MSS.

Composition of "size": laying and burnishing gold leaf.

- e. The Elements of Illumination.

"Rubricating" (*i.e.*, writing in red), writing and lettering in gold and colours, capitals and initials, decoration of initials, etc., borders and decoration of pages.

- f. The qualities of good Writing are Readableness, Beauty and Character, and Illumination is the Decoration of such Writing. Writing and Illumination form the necessary foundation of good Typography and Book Decoration.

EMBROIDERY AND TAPESTRY-WEAVING COURSE.

Teacher—Mrs. ARCHIBALD H. CHRISTIE.

- I. Embroidery—

Design. Materials. Study of historical examples in the Museum. Tracing on of patterns. Ancient and modern stitches and methods of work. Gold work. Figure work.

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Applied work. Cut and drawn work, etc. Making up of finished work.

II. *Tapestry Weaving*—

Design. Study of historical examples. Materials. Warping the loom. Methods of work. Weaving small tapestries in silk, gold, and wool from the students' own designs.

MARBLE AND STONE CARVING COURSE.

Teacher—A. E. SMITH.

These classes are formed for the purpose of enabling students the better to express their ideas in the materials for which they design in clay, thus giving them a knowledge of the limitations of these materials.

The course of study is divided into five terms, which correspond to the College terms.

First Term.—Practice in cutting marble and stone from ornament.

Second Term.—Finishing carving ornament.

Third Term.—Pointing with machine and carving a head in relief.

Fourth Term.—Pointing and carving a head in the round.

Fifth Term.—Enlargement with compasses and carving.

FURNITURE DECORATION, WOOD CARVING, AND GESSO WORK COURSE.

Demonstrator—GEORGE JACK.

This class is conducted with a view to giving the students practical insight into methods of obtaining ornament in relief, such as carving in wood and work in gesso. It is intended that decorative colouring as applied to gesso work shall be taken up as soon as the studies in progress are sufficiently advanced.

In so far as it is possible the students are encouraged to develop their own individuality. Students make their own designs for the work they are to carry out, and these designs undergo the teacher's supervision and correction with a view to the practical necessities of the material.

1st. Gesso work.

2nd. Wood carving.

3rd. The inlaying of various coloured woods as applied to cabinet making.

4th. Decorative painting on wood in connection with furniture.

5th. Furniture designing with a view to combining the various kinds of decoration practised by this class.

METAL WORK AND ENAMELLING COURSE.

Teacher—HAROLD STABLER.

Assistant Teacher—S. G. WISEMAN.

The instruction in this class is arranged with a view to affording students of the College an opportunity of becoming practically acquainted with the capabilities and limitations of the materials in which their designs, in this department of applied art, would be carried out.

Silversmithing and Metal Work.

The various processes used in these Crafts will be dealt with, such as raising, mounting, soldering and brazing.

Repoussé work and chasing will also be taught, as well as damascening and niello work.

Jewellery.

Instruction will be given in carving, filigree work, die work, piercing, chain making, and the mounting and setting of precious stones and enamels.

Enamelling.

The various methods of enamelling will be taught, particularly those suited to the decoration of metal work.

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PREFATORY NOTE.

Some changes have been made this year in the provisions as to the Certification of Four Year Students contained in paragraphs 7 (c) (d) and 7 (e) of the Appendix to the Statement. No other changes of substance have been made in the Statement or the Appendix.

(2) The provisions of this Statement are operative as from 1st August 1913.

L. A. Selby-Bigge

May 5, 1913.

BOARD OF EDUCATION.

Statement of Grants available from the Board of Education in aid of Technological and Professional Work in Universities in England and Wales.

1. Grants are payable by the Board of Education to any University or College forming a constituent part of a University in England or Wales, in aid of Courses in technological and professional instruction, including Courses for Teachers for Elementary and for Secondary Schools respectively.

For convenience the term "University Institution" will include either of these kinds of Institution.

2. Application for the recognition of courses should be made by the Governing Body of the University Institution not less than three months before the beginning of the first academical year in respect of which aid is sought. In considering such an application the Board will have regard to (i) the extent to which both the staff and advanced students of the University Institution are active in advancing knowledge; (ii) the existing supply of educational facilities similar to those given in the University Institution; (iii) the relation of the University Institution to Secondary and Continuation Schools; (iv) the allocation of all Parliamentary Grants of whatever kind to the University Institution; and (v) the various circumstances and characteristics which should differentiate the work and functions of the University Institution from those of other Institutions not of University rank.

When once given, grants will be continued ordinarily from year to year, but the Board will take the above-mentioned matters into consideration annually, and also take into consideration the Report furnished to them by the University Institution. The Report should include a full account of the income and expenditure of the Institution in respect of each academical year.

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3. Grants are payable in respect of courses which are either (a) Degree Courses, or (b) Diploma* Courses, and which are given as to the greater part earlier than 6 p.m.

Grants are also payable, without this limitation of hour, in respect of Post-graduate Courses, *i.e.*, courses in post-graduate study and research.

Courses will be termed for the present purposes either Full-time or Part-time Courses, according as they do or do not occupy the time of the student to the exclusion of any other regular employment during their continuance, *i.e.*, during a full academical year or more. If a course is not a Degree Course, it will not ordinarily be classified as Full-time unless it occupies the student for at least eight half days either morning or afternoon in each week throughout the three terms of the academical year.

4. The grant payable under these provisions will be made to the Governing Body of the University Institution under three heads: (i) in respect of any Department providing an approved Four Years' Course for the Training of Teachers for Elementary Schools; (ii) in respect of any Department for the Training of Teachers for Secondary Schools; and (iii) in respect of the rest of the work of the University Institution.

The grant will be paid by terminal instalments in the months of April, October and January, except the grant under (ii) above, which will be payable after the close of each academical year. The Board will inform the Governing Body before the 1st of April in each year what will be the amount of the three instalments payable during the twelve months beginning on that date.

5. When a Department for the Training of Teachers for Elementary Schools has been specially approved by the Board as providing a Four Years' Course in accordance with the conditions set out in the Appendix to this Statement, grants will be paid in accordance with the Regulations for the Training of Teachers for Elementary Schools at the rates named below on account of the Four-Year Students, and on account of the others in accordance with the appropriate provisions of those Regulations:—

- (a) On account of each student who is following a course of study leading to a Degree, an annual grant will be paid in respect of (i) the composition fee ordinarily charged by the University Institution for the course taken by the student, and (ii) the general supervision of the student by the Authorities of the Training Department. If no composition fee is charged by the University the grant will be assessed upon the basis of such fee or fees as may be approved by the Board.

* For this purpose the Board understand by a "Diploma Course" a course of not less than two years' duration appropriate to the needs of students who have been educated in Secondary Schools up to the age of 17 at least.

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(b) On account of each student in the last year of the course a grant will be paid at a rate not exceeding 35*l.* to be determined by the Board after consideration of the Report of the Inspector and the accounts of the Training Department. When a student takes a special course under paragraph 3 (b) of the Appendix, a grant will be paid for the last year of his course at a rate not exceeding 25*l.*

(c) For each year of the course grants will be paid in respect of the student's maintenance at the rates of 35*l.* on account of each man student and 25*l.* on account of each woman student resident in a Hostel, and 15*l.* on account of each man student and 10*l.* on account of each woman student not resident in a Hostel. The Board will require to be satisfied by receipts on prescribed forms that these sums have been handed over by the University Authorities to the Governing Body of the Hostel if the student is resident in a Hostel, or to the student personally if the student is not resident in a Hostel.

6. The grant payable in respect of a Department for the Training of Teachers for Secondary Schools will be calculated in accordance with the Regulations for the Training of Teachers for Secondary Schools.

7. The grant payable in respect of the rest of the work of the University Institution will be determined by the Board for each financial year (ending 31st March) upon a consideration of the bulk, standard, efficiency, and cost of this work as shown by inspection, and by the Report referred to in provision 2 above, and will include—

Full-Time Courses.

(a) a grant not exceeding 20*l.* on account of each student certified by the Vice-Chancellor or Principal or other approved officer as having satisfactorily completed a year's work in a Full-time Course extending over the previous academical year, and being either a Diploma Course, or Degree Course, or Post-graduate Course approved by the Board; and

Part-Time Courses.

(b) a grant not exceeding 8*l.* on account of each student similarly certified as having satisfactorily attended a Part-time Course of instruction, approved by the Board, during the previous academical year.

N.B.—The amount of grant referred to in this provision will depend in part upon whether or not any portion of the

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course falls within the purview of Parliamentary Grants made otherwise than under these provisions.

For Part-time Courses a grant will not be paid on account of any student in respect of more than one such course in any academical year, nor unless he has made at least 75 per cent. of the possible attendances at the course prescribed for him.

8. Grants are not available in respect of courses in preparation for a Matriculation examination, nor in respect of courses in religious subjects, nor will they ordinarily be available in aid of a University Institution which gives day instruction of a lower standard than that of Diploma Courses. They are further not available in respect of a course any part of which is aided by the Board of Education under their Regulations for Secondary Schools, or for Technical Schools, &c.

9. In making the grants the Board will necessarily be guided by a number of considerations, some of which will have a general bearing upon their decision when application is first made to them for aid or when they are making their annual survey of the work of an institution with a view to continuing their grants. Other considerations will have a direct effect upon the amount of grant paid in respect of each student who has taken a full-time or part-time course of instruction. Among the considerations referred to above as having a general bearing, the Board consider it as most important that the authorities of a University Institution should make such arrangements regulating the admission of students to courses as to exclude those who, for want of sufficient previous education (whether general or special) or from inexperience or other cause, are not qualified to take advantage of the instruction. Under these arrangements it is anticipated that no student will be admitted to a full-time diploma or degree course unless he is over 17 on the day preceding the beginning of the academical year and has passed a Matriculation or other examination qualifying him to undertake work of a University standard. The Board also regard it as important that a University Institution (subject to its discretionary power in dealing with exceptional cases) should require a student who applies for admission to a full-time diploma or degree course, to have been in attendance at a secondary school for at least four years subsequent to the age of 12, or to have been at least two years in regular employment and in attendance at organised Evening or Day Courses. It is also important that the system of registering the attendance of students should be suitable and carried out in such a way as to furnish adequate basis for any returns which may be made from time to time in support of claims for grant or for other purposes.

Finally, it is most important to bear in mind the standing and efficiency of the teaching staff. In considering whether

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they will recognise courses for the first time or continue to aid courses already recognised, or whether they should alter the amount of aid payable in respect of such courses, the Board will necessarily have regard to the extent to which the teaching staff encourage the advanced students to prosecute research and the extent to which the teachers avoid undertaking duties likely to interfere with the efficient discharge of their work in connection with the courses aided by these grants. In particular, regard will be had to the number of students who are taking diploma, degree or post-graduate courses respectively in calculating the rate of grant.

10. The decision of the Board as to the interpretation or application of any of the foregoing provisions will be conclusive so far as the award of grant is concerned. If any conditions herein laid down have not been fulfilled, or have been fulfilled during part of the year only, the Board may nevertheless pay grants either without deduction or with such deduction as they may think fit.

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APPENDIX.

Conditions under which a Department for the Training of Teachers for Elementary Schools may be recognised for a Four Years' Course.

1.—(a) A University Institution possessing a Department for the training of teachers for Elementary Schools may be recognised as providing a Four Years' Course, of which the first three years are to be devoted wholly or mainly to study in preparation for a Degree, and the fourth is to be devoted wholly to professional training in preparation for the work of teaching in Public Elementary Schools, subject to the exception that a student may enter for a Final Examination for a Degree not later than October of the fourth year. Before approving a Four Years' Course in any case, the Board will require, among other matters, to be satisfied that the course of study which is proposed for each student will be such as to fit him for the better discharge of the duties for which he is being trained, and that satisfactory arrangements will be made for a Final Examination in the necessary professional subjects in accordance with paragraph 5 (a).

(b) A student may be admitted to the second, third, or fourth year of a four years' course if he has completed one year, or two years, or the whole of the course for a Degree, as the case may be, before entering the Training Department, and if he satisfies the special conditions as to age, stated in paragraph 2 (a).

(c) No grant will be payable in respect of any time spent by a student who has already qualified for a Degree in studying for a further Degree.

2.—(a) Candidates proposed for admission to the first year of a four years' course must be over 17 years of age on the 1st August in the year of admission. Candidates proposed for admission to the second, third, or fourth year of the course must be over 18, 19, or 20 years of age, as the case may be, on the 1st August in that year.

(b) Candidates must have passed a Matriculation or other equivalent examinations under conditions approved by the Board.*

(c) Candidates must be qualified under the University regulations to enter upon full courses of study for Degrees without further examination.

(d) Candidates must as a condition of admission give an Undertaking to the Board for the purpose of securing that in

* For these conditions see Appendix A. II. of the Regulations for the Training of Teachers for Elementary Schools.

2—(cont.)

return for the grant payable under this Statement they will complete their training, and thereafter actually follow the profession of a teacher in an approved school for such period or periods, or repay to the Board such proportion of that grant, as may respectively be specified in the Undertaking. Copies of the Undertaking will be supplied on application.

(e) Candidates must be reasonably likely to obtain a University Degree not later than the end of the calendar year in which the third year of their course concludes, and must enter with the *bonâ fide* intention of doing so. Exceptions to this rule may be made in the case of candidates who will take an Honours Course which ordinarily occupies four years, subject to the condition that no person may spend more than three years in studying for a Degree as a recognised student.

(f) The Medical Officer of the Training Department must satisfy the Board by a certificate in a prescribed form that the health of each candidate for admission to the course is sufficient to allow the course to be entered upon without undue strain.

3.—(a) At the end of the first year of the course of training of each student—

- (i) the authorities of the University Institution will be required to report to the Board as to whether they consider the student to be fit to continue with profit the course for a Degree. A student should not as a rule be reported as fit to continue the course for a Degree unless he has passed by the end of his first year an Intermediate Examination for a Degree, or such other examination as is ordinarily taken by University students at the end of the first year of a course for a Degree.
- (ii) The Medical Officer must certify whether he considers the health of the student sufficient to allow the course to be continued without undue strain.

(b) A student who, at the end of his first year, is not reported by the authorities of the Training Department as fit to continue with his Degree Course, or for whom the required Medical Certificate cannot be forwarded, will only be allowed to remain at the University Institution until the end of his second year. During his second year the authorities of the Training Department must make arrangements to provide for such students a course of study, which should be devoted wholly or mainly to professional work, and should lead up to an examination of the kind contemplated in paragraph 5 (a).

(c) A student who is reported to the Board at the end of his first year as being fit to proceed with his Degree Course must be allowed to complete a course of training for the number of years for which he was originally admitted, except

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in the event of circumstances arising which would justify his dismissal from the University Institution.

4.—(a) The course of study of every student must include on its professional side the following subjects, unless in any case the Board have approved the omissions of one or more of these subjects under the condition stated below :—

The Principles and Practice of Teaching.
Hygiene and Physical Training.
Theory of Music and Singing.
Reading and Recitation.
Drawing.
Needlework (for Women).
Handwork.

(b) Practical work in Science must be included in the course of every student who does not produce evidence of having received instruction in Practical Science satisfactory both as to amount and as to the conditions under which it was given.

(c) Students whom the authorities of the Training Department can show to the satisfaction of the Board to be proficient in Drawing and Needlework respectively on admission to the Department, need not receive instruction in these subjects, but their proficiency in each of these subjects will be tested during their period of training in the manner provided by paragraph 6. Singing, together with the examination in the Theory of Music, may be omitted by students who are incapable of profiting by practical instruction in Music.

(d) The instruction in the Principles of Teaching must include instruction in the methods of teaching all the subjects taught in a Public Elementary School. A student will ordinarily be expected to spend twelve weeks of his course of training in class teaching. The greater part of this period must be spent in a Public Elementary School, and the remainder either in a Public Elementary School or in some other school approved by the Board as providing practice suited to the needs of intending teachers in Public Elementary Schools. In the case of students who have had practical experience, previous to entering the Training Department, as Teachers in Elementary Schools in some capacity recognised by the Board, the period of practice in class teaching may be reduced by such an amount as may be approved by the Board in particular cases, provided that the time given to practice in class teaching is in no case less than eight weeks.

5.—(a) Students in their last year must attend an Examination in the Principles of Teaching, and Hygiene, and also in the Theory of Music, unless they have been exempted from it under paragraph 4 (c).

(i) The Examination, which will be conducted by the University, should be designed with special reference to the requirements of persons intending to become teachers in Elementary Schools.

(ii) Arrangements should be made by which one or more of the Board's officers may act as Assessors on the Examining Board. The proposed papers of questions, with the syllabuses on which the examination is based, should be submitted for the approval of the Board through the Board's Assessor, who will attend any meeting of Examiners at which the results of the examinations are considered, but will not himself set questions or mark answers. Before the List of Passes is published, in so far as it concerns recognised students, the Assessor should have access to all records of such students' work, and should have the right to call for their worked papers in this and other examinations, and to refer them to the Board. The Board reserve the right to confirm or to veto any proposals put forward by the Examining Board.

(b) Students must not be prepared for, or allowed to enter for, any examination in secular subjects in their last year, other than that referred to above.

6. The proficiency of students in—

The Practice of Teaching,
Physical Training,
Reading and Recitation,
Drawing,
Needlework (for Women),
Singing,

will be ascertained as follows :—

(a) Students will be tested in these subjects in the last year of their course. The staff of the Training Department will indicate their opinion as to the proficiency of individual students in each of the subjects named (so far as they are included in the courses of study) by keeping a record of marks and a register showing the attendance of students at lessons in these subjects. These documents will be subject to the scrutiny of the Board or of their Inspector.

(b) Before the end of the academical year the Authorities of the Training Department will submit to the Board lists of the Degree students to be tested in that year,

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arranged in four groups according to proficiency in each of these subjects. The highest group should comprise those students only who are specially proficient, and may therefore be expected in ordinary circumstances to be small. The Inspector will award marks for each of these subjects after considering the lists, and imposing such tests as he may think necessary. Students who have been exempted from Drawing or Needlework in accordance with paragraph 4 (c) should be included in these lists with the other students, and their proficiency in these subjects may be tested by the Inspector.

7. The Certification of students will be subject to the following conditions:—

- (a) The Board will consider (i) the results of the Final University Examinations for a Degree, and (ii) the results of the students' Examinations in the subjects mentioned in paragraph 5 (a) and the grouped lists of students submitted by the Training Departments, together with the awards of the Inspectors upon their lists; and will then determine which of the students are qualified for recognition as Certificated Teachers.
- (b) A student will not as a rule be determined to be qualified for recognition as a Certificated Teacher, unless he has passed a Final Examination for a Degree; but the Board may, if they think fit, regard as so qualified a student who has failed to pass his Degree Examination if he has passed through a Four Years' Course, and is specially recommended by the Authorities of the University Institution.
- (c) A student who is not determined by the Board at the end of his period of training to be so qualified may, if the Board think fit, be recognised as a temporarily Certificated Teacher after leaving the Training Department for a period of two years and six months.
- (d) At the end of that period this recognition will cease, unless the student has either (i), if his failure to qualify for such recognition was due to failure to pass his approved Final Examination, passed either the Examination in which he previously failed, or such part as the Board may require of the Board's Final Examination for Students in Training Colleges; or (ii) if his failure to qualify for such recognition was due to failure to pass a satisfactory examination or test of proficiency in any of the subjects named in paragraph 5 (a) or 6, passed such further examination or test of proficiency in those subjects, or any of them, as may be required by the Board.

(cont.)

- (e) A student who has taken a special course of training under paragraph 3 (b) will not be determined to be qualified for recognition as a Certificated Teacher unless he has passed such examination as is required by the Board. The Board may, if they think fit, regard such a student as qualified for recognition as a Certificated Teacher if he has completed satisfactorily his course of professional study under paragraph 3 (b) and is specially recommended by the Authorities of the University Institution. A student who is not regarded as qualified for recognition as a Certificated Teacher on the above grounds may, if the Board think fit, be recognised as a temporarily Certificated Teacher for a period of two years and six months after leaving the Training Department; and in order to qualify for permanent recognition as a Certificated Teacher he will be required to pass within that period such further examinations or tests as may be required by the Board.
- (f) A student may obtain distinction in the Principles and Practice of Teaching, in Hygiene and Physical Training, and in Theory of Music and Singing, but in no other subjects.

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BOARD OF EDUCATION.

STATEMENT

OF

GRANTS AVAILABLE FROM THE BOARD OF EDUCATION

IN AID OF

TECHNOLOGICAL AND PROFESSIONAL WORK

IN

UNIVERSITIES

IN

ENGLAND AND WALES.

Presented to both Houses of Parliament by Command of His Majesty.



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OF

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FORTY-THIRD EDITION.

Regulations for the Competition in 1915.



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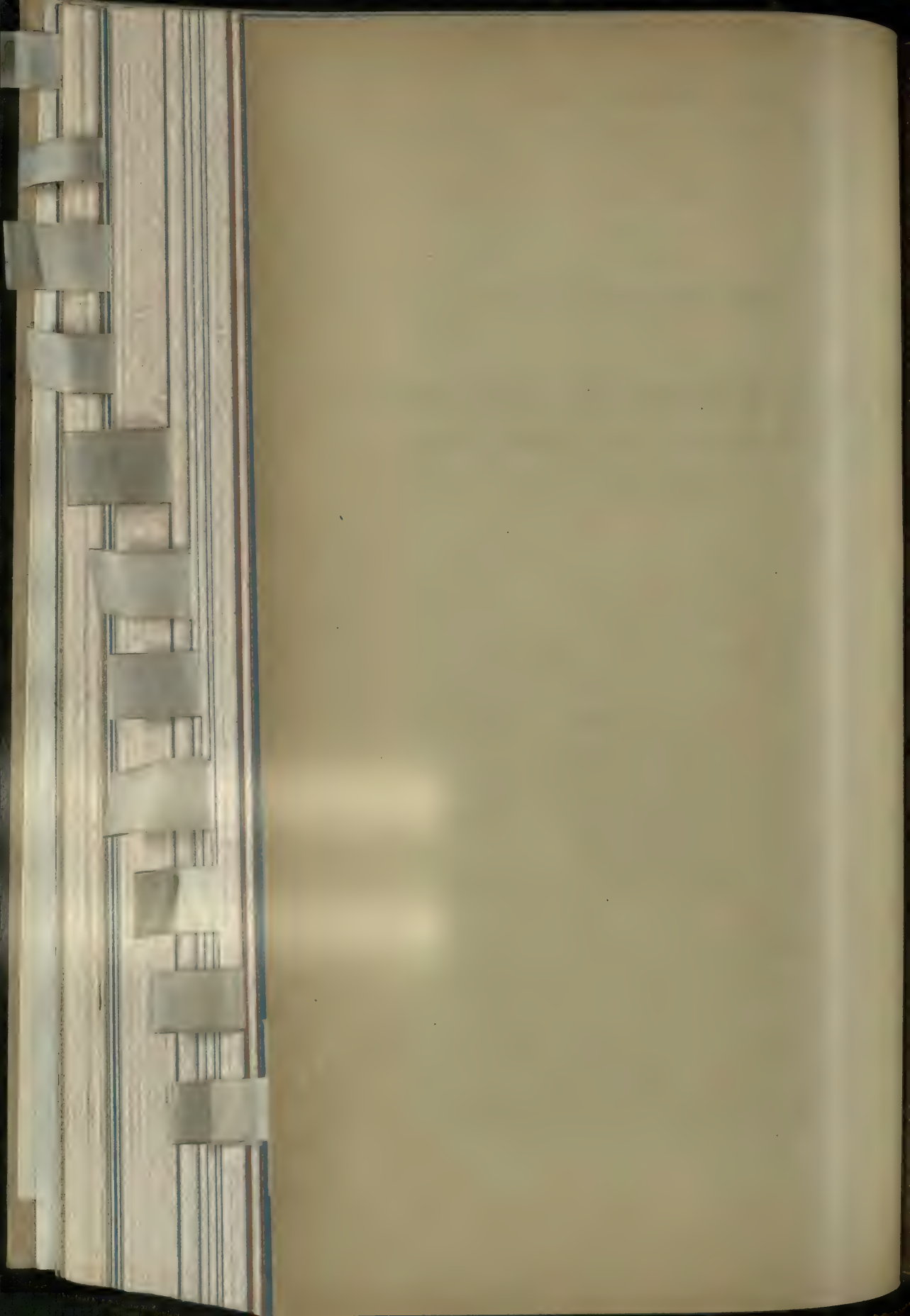
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RULES under which the SCHOLARSHIPS and EXHIBITIONS founded by Sir JOSEPH WHITWORTH, Bart., F.R.S., D.C.L., &c., &c., will be awarded in 1915.

1. THE WHITWORTH SCHOLARSHIPS are of the value of £125 a year, and tenable for three years; the EXHIBITIONS are of the value of £50 each, and tenable for one year only. Both the Scholarships and Exhibitions are open for competition to all His Majesty's subjects—whether of the United Kingdom, India, or the Colonies and Dependencies. The rules of the competition are the same for both Scholarships and Exhibitions.

2.—(a) The candidate must be of sound bodily constitution.
(b) He must not have completed the 26th year of his age on the 1st May of the year in which he competes.

(c) He must have been engaged in handicraft in the workshop of a mechanical engineer during ordinary working hours for at least three years. Six consecutive months in each of those years must have been devoted to the forge, or the bench, or the vice, or the lathe, or have been divided in any manner between the vice and the lathe.* In all, not less than three months must have been spent at the vice, and not less than three months at the lathe, and the sum of the periods devoted to the vice and to the lathe must be at least 12 months. The whole of the qualifying work must have been completed before the 1st May of the year in which he competes.

3. FOUR SCHOLARSHIPS AND THIRTY EXHIBITIONS WILL BE COMPETED FOR IN 1915. The following are the subjects of competition:—

Practical Geometry and Graphics
(Practical Plane and Solid Geometry).
Machine Construction and Drawing.
Building Construction.
Naval Architecture.
Pure Mathematics.
Practical Mathematics.
Theoretical Mechanics (Solids).
Theoretical Mechanics (Fluids).
Applied Mechanics (Materials and Structures).

Applied Mechanics (Machines and Hydraulics).
Sound and Light.†
Heat.
Magnetism and Electricity.
Inorganic Chemistry. Theoretical.
Inorganic Chemistry. Practical.†
Metallurgy, Theoretical.
Metallurgy, Practical.†
Heat Engines.
Freehand Drawing.

4.—(a) In all the subjects, except Freehand Drawing, two examinations will be held, viz., a "Lower" and a "Higher" examination, and, with the exception of the subjects marked †, these will be identical with the Lower and Higher Examinations of the Board's scheme of general Science Examinations.

* The Board may accept for this purpose time spent at the Milling Machine—in part at least—in lieu of time spent at the lathe: this does not apply to the conditions of the sentence following.

(b) The Lower Examination in each subject will consist of one paper, except that in the Lower Examination in Practical Inorganic Chemistry a short written paper will be set in addition to the practical tests. The Higher Examination will consist of one paper in all cases except Pure Mathematics, in which two papers will be set.

(c) No candidate will be permitted to take both the Higher and the Lower Examination in the same subject.

(d) The examination in Freehand Drawing will be the Freehand Drawing examination in the Board's Qualifying Examination for Royal Scholarships and Free Studentships, and will be held as part of the Competition on the 1st March.

(e) Candidates who take the Higher Examination will be required, in all subjects except Practical Geometry and Graphics, Pure Mathematics, Practical Mathematics, Theoretical Mechanics (Solids and Fluids), Machine Construction and Drawing, Building Construction, and Naval Architecture, to submit their laboratory note-books, signed and certified by their teachers, for inspection.

(f) No fee will be charged by the Board to candidates for any examination taken for the purpose of the competition. The amount of local charges which may be made by the Local Education Authority or Managers is given in the Board's Regulations for the Local Management and conduct of Examinations. No announcement (other than a statement that a candidate has or has not succeeded in qualifying in the subjects mentioned in Article 6) will be made of the result of any examination unless it is identical with a "Lower" or "Higher" examination in the Board's Scheme of General Science Examinations, and unless the candidate has satisfied all the conditions of admission to that examination, including the payment of the fee.

5.—(a) Candidates who are, or intend to be, engaged in machine-making—cotton, woollen, flax, &c., or in engineering—marine, locomotive and fixed—or in artillery, may take up all the subjects set out in Article 3 except Building Construction and Naval Architecture; those engaged in the building trades and coach-making, all except Machine Construction and Drawing, and Naval Architecture; those engaged in Naval Architecture, all except Machine Construction and Drawing, and Building Construction. The requirements of Article 2 (c) as to practical workshop experience apply equally to all candidates.

(b) The number of Scholarships and Exhibitions awarded in each of the foregoing classes will be proportioned to the number and ability of the candidates from each class.

6. No candidate unless qualified under previous regulations (see Article 7) can obtain a Scholarship or Exhibition who has not passed in—

(a) The Lower or Higher Examination in Practical Geometry and Graphics (Practical Plane and Solid Geometry).

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- (b) The Lower or Higher Examination in Pure Mathematics or Practical Mathematics.
- (c) The Lower or Higher Examination in Theoretical Mechanics (Solids) or Theoretical Mechanics (Fluids).
- (d) Freehand Drawing.

A candidate who is not already qualified in these subjects must take them at the competitive examinations, except that in the case of (c) he may qualify by passing the examination in Theoretical Mechanics (Solids) or Theoretical Mechanics (Fluids) at the qualifying examination for Royal Scholarships and Free Studentships. A candidate who is unsuccessful in qualifying in Mechanics at the qualifying examination referred to, is thereby debarred from obtaining a qualification in this subject in the competition itself. Particulars of the qualifying examinations for Royal Scholarships, &c., will be found in the Board's Regulations for Scholarships, Exhibitions, &c., in Science, 1911.

7. If a candidate has qualified under previous Regulations in the subjects specified in Article 6, it will not be necessary for him to qualify again in those subjects, but no marks can be counted for a success obtained previous to the competition.

8. No candidate can obtain a Scholarship or Exhibition who has not attained sufficient handicraft power. If it be thought necessary by the Board, this may be tested by requiring the candidate to make two Whitworth screw bolts, 1 inch in diameter and 4 to 6 inches long, with hexagonal heads and nuts alike within $\cdot 001$ inch.

9. The maximum number of marks obtainable in each subject of the examination is:—

Lower Examination - - - - - 200

Higher Examination (except Pure Mathematics) - - - 300

Half the above number of marks will be obtainable in the case of the Practical Examinations.

250 marks will be obtainable on each of the two papers constituting the Higher Examination in Pure Mathematics.

150 marks will be obtainable in Freehand Drawing.

10. Before considering what awards should be made, the marks in each subject will be diminished in the Lower Examination and in Freehand Drawing by 40 per cent., and in the Higher Examination by 30 per cent. of the maximum allotted in each case.

11. Each successful candidate for a SCHOLARSHIP will be required to submit, for the approval of the Board, a scheme showing precisely how he will spend his time during his tenure of the Scholarship; and it must be clearly understood that his tenure is subject to the condition that the holder pursues such course of work or study as has been approved, or required by the Board. The course should be theoretical and practical so as to improve both his mental and manual training. The holder of a Scholarship will be required to devote his time

whilst holding the Scholarship, entirely to the prosecution of his education as a mechanical engineer. The Scholar may be required to attend in person, on a date specified, at the Offices of the Board, in order to submit his scheme of work. In such cases he will receive a subsistence allowance of 7s. 6d. for each night he is required to be absent from home, and third-class railway fare; but no cab or omnibus fares are allowed.

12. On the final award of each Scholarship the first half-yearly payment of the Scholarship money will be made. The further payments will be made half-yearly on the receipt, on the 1st May and 1st November of each year, (a) of a satisfactory report to be submitted by the scholar, showing that he has followed out the approved course, and (b) of satisfactory evidence of progress, diligence, and regular attendance to be submitted both by the Authorities of the Institution at which the scholar has been pursuing his theoretical studies, and by some person in authority in the firm or shops where he has been employed. The Scholarship may be withdrawn if the Board are not satisfied with these reports. The Board may at their discretion vary the number and time of payment of the instalments of the Scholarships.

13. No scholar will be permitted to take any place of profit, or continue in any business he may be engaged in when he obtains his Scholarship, save under very exceptional circumstances and with the special sanction of the Board. He must devote himself to completing his education at the place or places of study or work approved by the Board.

14. The SCHOLARSHIPS are not tenable with the Royal Scholarships and Free Studentships of the Board of Education, nor with Admiralty Studentships and Scholarships of the Royal Naval College. The holders of such Royal Scholarships or Free Studentships are, however, not debarred from competing for the Whitworth Scholarships, and holding them if they resign the other assistance. No candidate can obtain a Whitworth Scholarship twice, and no Whitworth scholar is eligible to compete for a Whitworth Exhibition. Those scholars who follow out their approved Courses to the satisfaction of the Board will receive a Certificate, and any who have not previously held Whitworth Exhibitions will also receive a Bronze Medal. Scholars who have previously received Medals as Exhibitioners will not be entitled to a further Medal.

15. Each successful candidate for an EXHIBITION will be required to submit for the approval of the Board a scheme of work or study for the year of holding his Exhibition. Considerable latitude will be permitted to him in framing this scheme, which should be theoretical and practical so as to improve both his mental and manual training. On the approval of his scheme half of his Exhibition money will be paid. The other half will be paid on the receipt, at the end of the Exhibition year, which terminates on the 1st May, (a) of a satisfactory report to be submitted by the Exhibitioner, showing that he has

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followed out the approved course, and (b) of satisfactory evidence of progress, diligence, and regular attendance to be submitted both by the Authorities of the Institution at which the Exhibitioner has been pursuing his theoretical studies, and by some person in authority in the firm or shops where he has been employed. The Exhibitioner must also submit to the Board any laboratory note-books which have been used during the year. The Board may withhold the second moiety of the Exhibition if they are not satisfied with the reports and note-books referred to above. Exhibitioners will be permitted to hold posts of profit or emolument while holding their Exhibitions. Those Exhibitioners who follow out their approved Courses to the satisfaction of the Board will receive a Certificate and Bronze Medal.

16. The Exhibitions are tenable with the Royal Scholarships and Free Studentships of the Board of Education, but not with Admiralty Studentships and Scholarships of the Royal Naval College. No person may hold a Whitworth Exhibition twice; an Exhibitioner may, however, if otherwise eligible, compete for a Scholarship in a subsequent year.

17.—(a) Intending candidates must make their applications for admission to the competition on the prescribed form (copies of which can be obtained from the Board) not later than **1st January 1915**. The application must indicate the subjects and stages in which the candidate desires to be examined for the purposes of the competition, and must be accompanied by a certificate of British nationality upon a separate form prescribed for the purpose. Credit will not be given for marks obtained in examinations other than those entered on the form of application. A certified statement of the candidate's workshop qualifications under Article 2 (c) must be forwarded on the prescribed form not later than the **15th May 1915**.

(b) The Board will require candidates who are successful in the competition to submit a medical certificate and a birth certificate.

18. Candidates must make their own arrangements for admission to the Competitive Examinations to be held from the 1st to the 20th May. The Board will announce to the candidates concerned the arrangements which have been made for the examination in Frechand Drawing to be held on the 1st March. The Time Table of the Examinations is printed on page 7.

NOTE.—The syllabuses of the subjects of competition are contained in the Board's "Regulations and Syllabuses for Examinations in Science and Technology, 1915" (Rules 104), which may be obtained (price 3d., by post 4d.) from Messrs. Wyman and Sons, Ltd., Fetter Lane, London, E.C., and 54, St. Mary Street, Cardiff; or H.M. Stationery Office (Scottish Branch), 23, Forth Street, Edinburgh; or Messrs. E. Ponsonby, Ltd., 116, Grafton Street, Dublin.

TIME TABLE OF COMPETITIVE EXAMINATIONS
FOR
WHITWORTH SCHOLARSHIPS AND EXHIBITIONS, 1915.

Date.	Day of the Week.	Time.	Subject.
1st March -	Monday -	7—9.30 p.m. 2—10 p.m.	Freehand Drawing. Practical Metallurgy (Higher Examination).
1st May -	Saturday -	5—10 p.m.	Practical Metallurgy (Lower Examination).
3rd " -	Monday -	7—10 p.m. 2.30—10.30 p.m.	Sound and Light. Practical Inorganic Chem- istry (Higher Examina- tion).
4th " -	Tuesday -	5.15—10.30 p.m.	Practical Inorganic Chem- istry (Lower Examina- tion).
5th " -	Wednesday -	7—10 p.m.	Theoretical Mechanics (Fluids).
6th " -	Thursday -	7—10 p.m.	Theoretical Mechanics (Solids).
7th " -	Friday -	7—10 p.m.	Magnetism and Electricity.
8th " -	Saturday -	6—10 p.m.	Practical Geometry and Graphics.
10th " -	Monday -	7—10 p.m.	Pure Mathematics, Lower, and Higher—Paper I.
11th " -	Tuesday -	7—10 p.m.	Pure Mathematics, Higher —Paper II.
12th " -	Wednesday -	7—10 p.m.	Heat.
13th " -	Thursday -	7—10 p.m.	Theoretical Metallurgy.
14th " -	Friday -	7—10 p.m.	Theoretical Inorganic Chemistry.
15th " -	Saturday -	6—10 p.m.	Building Construction. Naval Architecture. Machine Construction and Drawing.
17th " -	Monday -	7—10 p.m.	Practical Mathematics.
18th " -	Tuesday -	7—10 p.m.	Applied Mechanics (Mat- erials and Structures).
19th " -	Wednesday -	7—10 p.m.	Applied Mechanics (Ma- chines and Hydraulics).
20th " -	Thursday -	7—10 p.m.	Heat Engines.

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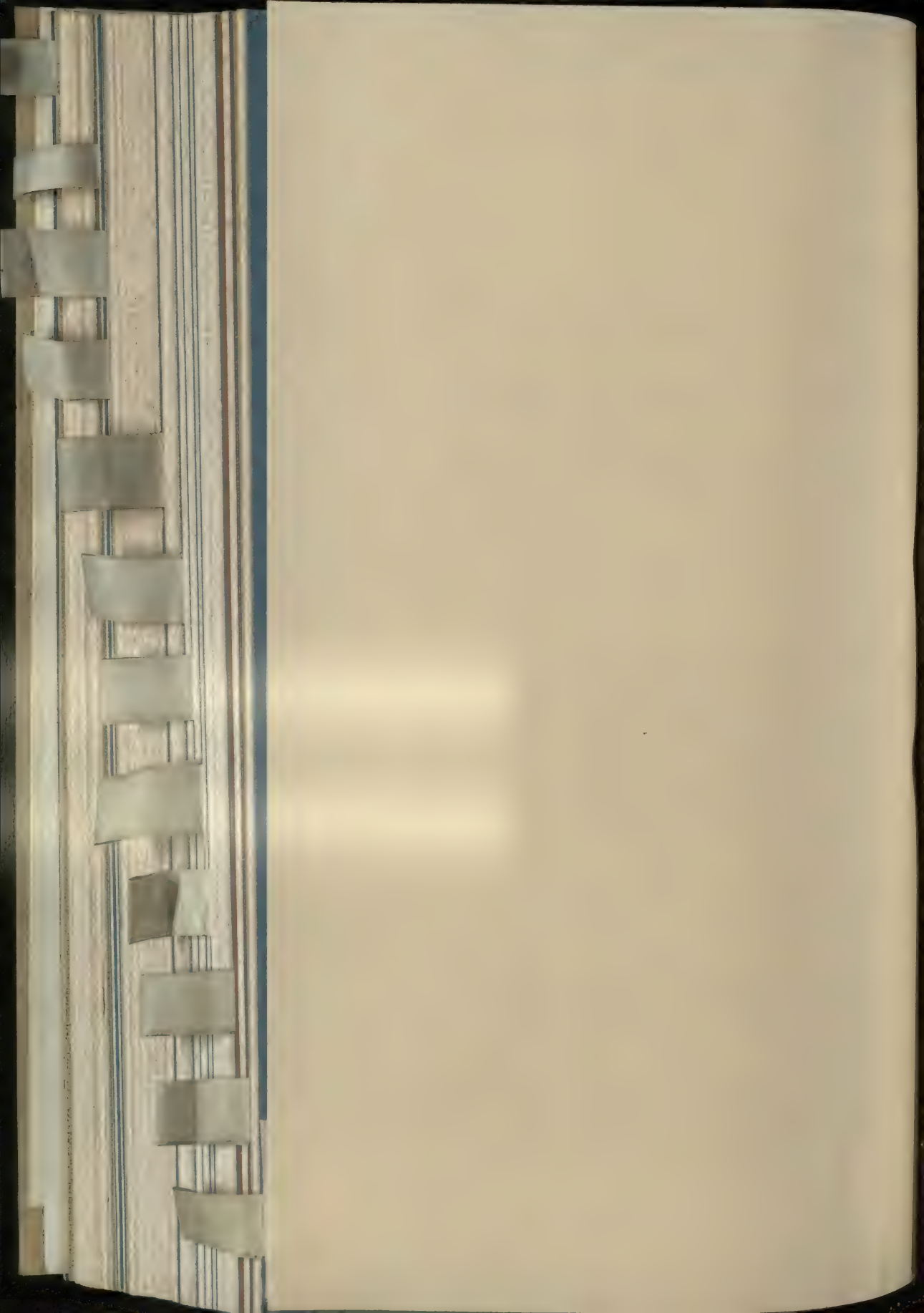
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PREFATORY MEMORANDUM.

The awards for Science to be made by the Board under these Regulations are identical with those made by the Board under the Regulations for Scholarships, Exhibitions, &c., in Science, 1914.

No changes of substance have been made in the Regulations for 1915.

L. A. Selby-Bigge

August 1914.

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BOARD OF EDUCATION.

CHAPTER I.

ROYAL SCHOLARSHIPS AND FREE STUDENTSHIPS (SCIENCE), 1915.

CONDITIONS OF COMPETITION AND TENURE.

General Conditions.

1.—(a) Royal Scholarships and Free Studentships are open only to British Subjects, and the Board may refuse to award them to persons whose financial circumstances do not warrant such aid. Royal Scholarships and Free Studentships may not be held concurrently with Special Studentships or Local Science Exhibitions; but, subject to the sanction of the Board of Education, these awards may be held concurrently with other Scholarships or aid granted by local authorities.

(b) No person who has held a Studentship in Training or a Special Studentship for Teachers of Science or Technology, or who has been for more than one session a student of the Imperial College of Science and Technology, London, or of the Royal College of Science, Dublin, is eligible to compete for a Royal Scholarship or Free Studentship.

(c) No person who has held a Royal Scholarship or Free Studentship (or, under former regulations, a Royal Exhibition or National Scholarship in Science), is eligible to enter into further competition for these awards.

(d) No person who has been trained as a recognised Student in a Training College for the Training of Elementary or Secondary School Teachers under the Regulations of the Board of Education, the Scotch Education Department, or the Commissioners of National Education for Ireland, will be eligible to compete for a Royal Scholarship or Free Studentship.

2. Not less than twenty Royal Scholarships and eleven Free Studentships will be offered for competition in 1915.

3. Intending candidates must make their applications for admission to the competition on the prescribed form (copies of which can be obtained from the Board) not later than **1st January 1915**. The application must indicate the subjects and stages in which the candidate desires to be examined for the purposes of the competition, and must be accompanied by a certificate of British nationality.

upon a separate form prescribed for the purpose. Credit will not be given for marks obtained in examinations other than those entered on the form of application.

Qualifying Test for Admission to the Competitive Examination.

4.—(a) No person will be permitted to compete for a Royal Scholarship or Free Studentship unless he can satisfy the Board that he has received a good general education. For this purpose a candidate must submit to the Board evidence of his educational qualifications in the following subjects:—

English.

Mathematics.

Mechanics (Solids and Fluids).

Chemistry.

Sound, Light and Heat.

Magnetism and Electricity.

Freehand Drawing.

(b) Particulars of the qualifications on which a candidate relies as evidence of having received such an education must be submitted upon the application form.

(c) A Matriculation Examination Certificate of a British University will be accepted as evidence of the candidate's proficiency in English, and in such of the other subjects specified above as were successfully offered for that Examination.

(d) The requirements in Mathematics and in the Science subjects will be satisfied by a first class in Stage 1 (of the Board's old examinations), except that for candidates in Groups A, B, and C (*see* Articles 9 and 10) a success in Mathematics (Pure or Practical) in Stage 2 (of the old examinations) or in the Board's Lower Examination will be required.

(e) A pass at the Board's Examinations in an Art subject involving proficiency in Freehand Drawing will be accepted as evidence of qualification in Freehand Drawing.

(f) The Board are also prepared to consider such alternative evidence of proficiency in any of these subjects as candidates may wish to advance.

5. Candidates whose educational qualifications are approved as satisfactory will receive from the Board a notification to that effect and will be registered as candidates in the Competitive Examination.

6.—(a) Candidates who fail to satisfy the Board of their general educational qualifications will be notified of the

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subjects in which they will be required by the Board to take qualifying examinations. The subjects of these examinations will be those specified in Article 4 (a) above.

(b) In Mathematics the papers set for candidates in Groups A, B, and C will be different from those set for candidates in Groups D and E.

(c) The standard of the qualifying examinations will correspond to that required in 1914.

(d) These examinations, for which no fee will be charged by the Board, will be held from 1st to 9th March. The Time Table is printed on page 17. Further arrangements will be announced later.

(e) Candidates will be informed of their success or failure at the qualifying examinations in time to enable them, in the event of their failure, to retire from the Competitive Examination.

(f) Those candidates who satisfy the Board of their educational qualifications under Article 4 above, or under this Article, will alone be eligible to compete for Royal Scholarships and Free Studentships.

Conditions of the Competitive Examination.

7. Royal Scholarships and Free Studentships tenable for periods beginning with the Session 1915-16 will, so far as there are candidates of satisfactory merit, be awarded on the results of the Science Examinations of the Board held in 1915, and in the case of certain subjects, of Special Examinations held for the purpose of the award of these Scholarships and Studentships. Previous successes will not be counted.

8. Candidates must make their own arrangements for admission to the Competitive Examinations to be held from the 1st to the 20th May. The Time Table of these Examinations is printed on page 17.

9.—(a) The subjects for competition for the Royal Scholarships and Free Studentships are divided into groups; for the year 1915 sixteen Scholarships and eight Free Studentships are allotted for competition in the five groups detailed below, four Scholarships and two Free Studentships in each of the Groups A, B, and C, and two Scholarships and one Free Studentship in each of the Groups D and E. The other Scholarships and

Free Studentships may be awarded in such groups as the Board may decide.

(b) Should the standard of the attainments of the candidates in a group be unsatisfactory, the Board may withhold any of the awards in that group, or may transfer them to another group.

10. The subjects included in the various groups are :—

GROUP A.—*Mechanics.*

Pure Mathematics.

Practical Mathematics.

Theoretical Mechanics (Solids).

Theoretical Mechanics (Fluids).

Applied Mechanics (Materials and Structures).

" " (Machines and Hydraulics).

Heat Engines.

{ Machine Construction and Drawing,

or

{ Building Construction,

or

{ Naval Architecture.

GROUP B.—*Physics.*

Pure Mathematics.

Practical Mathematics.

Sound and Light.*

Heat.

Magnetism and Electricity.

Inorganic Chemistry, Theoretical.

" Practical.*

GROUP C.—*Chemistry.*

Pure Mathematics.

Practical Mathematics.

{ Heat,

or

{ Magnetism and Electricity.

Inorganic Chemistry, Theoretical.

" " Practical.*

{ Organic Chemistry, Theoretical.

" " Practical,*

or

{ Metallurgy, Theoretical.

" " Practical.*

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GROUP D.—*Biology.*

General Biology.*

Human Physiology.*

Zoology.*

Botany.*

GROUP E.—*Geology.*

Geology.*

Mineralogy.*

Zoology.*

Botany.*

11.—(a) The Examinations in the subjects marked * will be held for the purposes of this competition only.

(b) In all the subjects except General Biology two examinations will be held, viz., a "Lower" and a "Higher" Examination, and, with the exception of the subjects marked *, these will be identical with the Lower and Higher Examinations of the Board's Scheme of General Science Examinations. A Lower Examination only will be held in General Biology.

(c) The Lower Examination in each subject will consist of one paper, except that in the Lower Examinations in Practical Organic and Practical Inorganic Chemistry a short written paper will be set in addition to the practical tests. The Higher Examination will consist of one paper in all cases except Pure Mathematics, in which two papers will be set.

(d) Candidates who take the Higher Examination will be required, in all subjects except Pure Mathematics, Practical Mathematics, Theoretical Mechanics (Solids and Fluids), Machine Construction and Drawing, Building Construction, and Naval Architecture, to submit their laboratory note-books signed and certified by their teachers for inspection.

(e) No fee will be charged by the Board to candidates for any examination taken for the purpose of the competition. The amount of local charges which may be made by the Local Education Authority or Managers is given in the Board's Regulations for the Local Management and conduct of Examinations. No announcement will be made of the result of any examination, unless it is identical with a "Lower" or "Higher" examination in the Board's Scheme of General Science Examinations, and unless the candidate has satisfied all the conditions of

admission to that examination, including the payment of the fee.

12. A candidate may not compete in more than one group, and must state beforehand the group in which he elects to compete. He may take all the subjects in the group selected, except in the case of alternative subjects, only one of which may be taken.

13. No candidate will be permitted to take both the Higher and the Lower Examination in the same subject.

14. The maximum number of marks obtainable in each subject of the examination is:—

Lower Examination	-	-	-	200
Higher	„	(except Pure		
Mathematics)	-	-	-	350

Half the above number of marks will be obtainable in the case of the Practical Examinations.

250 marks will be obtainable on each of the two papers constituting the Higher Examination in Pure Mathematics.

15.—(a) In awarding Royal Scholarships and Free Studentships the Board will take into consideration the degree of success obtained by candidates in each of the subjects taken by them as well as the results of the Examination as a whole.

(b) Before considering what awards should be made the marks in each subject will be diminished in the Lower Examination by 40 per cent., and in the Higher Examination by 30 per cent. of the maximum allotted in each case.

Conditions of Tenure.

16. Each Scholarship or Studentship is held on the condition that the holder attends regularly the approved course of instruction (*see* Articles 17 and 18 below), complies with all the rules of the Institution at which the Scholarship or Studentship is held, and passes the prescribed examinations.

17. A Royal Scholarship entitles the holder to free admission to the lectures and laboratory work at the Imperial College of Science and Technology, or at the Royal College of Science, Dublin, and to a maintenance allowance of 60*l.* a session. The scholarship is tenable during the period necessary to complete the course which is approved by the Board for each scholar at either Institution.

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18. A Free Studentship entitles the holder to free admission to the lectures and laboratory work at the Imperial College of Science and Technology, and is tenable during the period necessary to complete the course which is approved by the Board for each student at that Institution.

19. The holder of a Royal Scholarship will be allowed railway fare (third class) between his home and London or Dublin, as the case may be, for one journey to and from each session. The holder of a Free Studentship will be allowed railway fare (third class) for one journey to London upon taking up his Free Studentship.

Note.—The syllabuses of the subjects of competition are contained in the Board's "Regulations and Syllabuses for Examinations in Science and Technology, 1915" (Rules 104), which may be obtained (price 3d., by post 4½d.) from Messrs. Wyman and Sons, Ltd., Fetter Lane, London, E.C., and 54, St. Mary Street, Cardiff; or H.M. Stationery Office (Scottish Branch), 23, Forth Street, Edinburgh; or Messrs. E. Ponsonby, Ltd., 116, Grafton Street, Dublin.

WHITWORTH SCHOLARSHIPS AND EXHIBITIONS, 1915.

Conditions of Competition and Tenure.

20. Four Whitworth Scholarships of 125l. a year, tenable for three years, and thirty 50l. Exhibitions tenable for one year, are awarded in competition at the Examinations held by the Board for the award of Royal Scholarships and Free Studentships with the addition of Examinations in Practical Geometry and Graphics, and Freehand Drawing. The conditions of the competition and of the awards are stated in the "Prospectus of Sir Joseph Whitworth's Scholarships and Exhibitions for Mechanical Science," which is published separately. Applications for admission to the Competition must be made not later than 1st January 1915.

NOTICE TO CANDIDATES IN SCOTLAND AND IRELAND.

As the local arrangements for the Board's Examinations in Science in Scotland and Ireland are made by the Scotch Education Department and the Department of Agriculture and Technical Instruction respectively.

applications by Candidates in Scotland and Ireland for information as to centres of Examination, &c., should be addressed to "The Secretary, Scotch Education Department, Whitehall, London, S.W.," or to "The Secretary, Department of Agriculture and Technical Instruction, 4, Upper Merrion Street, Dublin," as the case may be.

CHAPTER II.

LOCAL EXHIBITIONS IN SCIENCE.

21. Where a Local Education Authority or other persons (in this chapter referred to as the managers of the local fund) contribute a sum of not less than 25*l.* per annum towards an approved Local Science Exhibition, the Board may contribute towards the Exhibition subject to the conditions stated in this chapter.

22.—(a) The Board's contribution will not exceed 25*l.* per annum in respect of any one exhibitor, nor will it be such as to make the total amount of the Exhibition exceed the sum recognised by the Board as reasonably paid by the managers of the local fund in respect of the exhibitor's maintenance allowance and fees or other payments for his instruction.

(b) If the Exhibition is held at the Imperial College of Science and Technology the Board's contribution will be made in respect of maintenance allowance only. (See Article 27 (c)).

23. The local contribution may be made from a rate levied under Part II. of the Education Act, 1902, or from subscriptions of living persons raised for this definite purpose. Endowments or moneys held in trust, unless subscribed for this definite purpose by the donor during his lifetime, or funds derived from the residue under the Local Taxation (Customs and Excise) Act, 1890, or other mere surplus funds, will not be regarded as local contributions for the purpose of this chapter.

24. The conditions of award of the Exhibition may be determined by the managers of the local fund with the approval of the Board, but must always include provision for the award to be made on the results of a competition held either in connection with the Board's Examinations for Royal Scholarships, etc., or according to some other method approved by the Board. If the former alternative

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is adopted, the competition must be held in accordance with the provisions of Articles 7-15 above.

25. If the competition is to be held in connection with the Board's Royal Scholarship Examinations, a list of candidates and of the centres at which they propose to be examined, together with full particulars of the groups, subjects, and stages selected must be sent to the Board not later than **1st March 1915**.

26.—(a) No award will, as a rule, be approved by the Board unless the candidate has reached a standard comparable with that required for the award of a Royal Scholarship.

(b) The Board may refuse to contribute towards any Exhibition for which there is not a sufficient number of competitors, or to approve the award to a candidate who is insufficiently advanced.

(c) The Board may refuse to approve the award of a Local Exhibition to a candidate whose financial circumstances do not appear to warrant such aid.

(d) The Exhibition may not be held concurrently with any of the Board's Scholarships, Exhibitions, or Studentships, nor may it be held by a person who is, or has been, recognised as a student under the Regulations for the Training of Teachers for Elementary Schools.

27. The place or places where the Exhibition is to be tenable, and where the exhibitor is to pursue his studies, may be fixed by the managers of the local fund, subject to the following conditions:—

(a) The exhibitor must attend some course of Science instruction of University standard at a University, University College, or other institution approved by the Board at which such a course is provided for the students ordinarily in attendance at the institution as well as for exhibitors under this chapter. The course proposed to be taken by the exhibitor must be approved by the Board, and it must as a rule be one of the courses so provided.

(b) The exhibitor must have the option of holding his Exhibition at the Imperial College of Science and Technology, subject to compliance with the regulations of that institution. These regulations require the Exhibitor to satisfy the authorities of the College by examination of

otherwise that he has received a good general education, including, as essential elements, English, the elements of Chemistry and Physics, Mathematics, Mechanics, and Freehand Drawing, with—in the case of engineering students—Mechanical Drawing, so as to render it possible for him to follow the College course with advantage.

- (c) The Board have made arrangements by which exhibitors exercising the option referred to in (b) will be admitted without any charge for their instruction.
- (d) If the exhibitor attends a college or other institution aided or maintained by the managers of the local fund, the Board may require that the fees or ordinary payments in respect of the instruction shall be wholly or partially remitted.
- (e) The exhibitor's whole time must be devoted to instruction in the approved course.
- (f) The Board may require a report on the progress of the exhibitor to be made by one of their officers deputed for this purpose.
- (g) A Local Science Exhibition is tenable for three years, except in cases where the course of study approved is of a sufficiently advanced character to justify a shorter tenure. Any Exhibition may be discontinued after any year if the Exhibitor's progress is not satisfactory.

28. The Board's contribution will not be payable till the managers of the local fund have disbursed to or on behalf of the exhibitor the full amount of the Exhibition including the amount of the Board's grant. Before paying their contribution the Board will require (i) a certificate from the Principal of the institution at which the Exhibition is held of the satisfactory conduct and progress of the exhibitor, (ii) evidence from the institution of the receipt by them of the exhibitor's fees or other payments for instruction, and (iii) a receipt from the exhibitor for the amount of his maintenance allowance.

29.—(a) Particulars of any Exhibition to which it is desired that the Board should contribute under this chapter must be returned on the prescribed form in time to admit of

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their proper consideration by the Board, and their due advertisement in the locality, and in any case not later than the **1st January 1915**. The names of the successful candidates, and of the institutions where they will pursue their studies, must be furnished to the Board on the prescribed form before **1st September 1915**.

(b) Applications by candidates for admission to competitions for Local Science Exhibitions must be made to the Local Education Authority, or other Managers of the local fund.

30. Applications for the renewal of Exhibitions for a second or third year must be made on the prescribed form not later than the **1st September**.

CHAPTER III.

OTHER AWARDS.

SPECIAL STUDENTSHIPS FOR TEACHERS OF SCIENCE OR TECHNOLOGY.

31. The Board are prepared to nominate a limited number of Teachers of Classes in Science or Technology for attendance at courses of advanced instruction at the Imperial College of Science and Technology—as a rule those of the third or fourth year. Particulars of these courses will be issued early in 1915.

32. Persons selected are nominated, in the first instance, for a term or for a session, but, in exceptional cases, if the Board are satisfied that their professional efficiency will benefit adequately by further instruction in the College, the tenure of the award may be extended for further periods, so, however, that it shall not continue for more than two years in all.

33. Teachers holding these awards will be entitled to free admission to the lectures and laboratory work of the approved course at the Imperial College of Science and Technology, to maintenance allowances at the rate of 60*l.* a year for the duration of the courses to which they are nominated, and to third-class railway fare for one journey each session to and fro between their homes and London.

34.—(a) Candidates for these awards should have sufficient knowledge of Science to enable them to enter at once upon the courses to which they are nominated, and will be required to furnish on the prescribed application form particulars of their education and training and of their teaching experience.

(b) No person who has been trained as a recognised student in a Training College for the training of Elementary or Secondary School Teachers under the Regulations of the Board of Education, the Scotch Education Department, or the Commissioners of National Education for Ireland, will be eligible for the award of a Special Studentship for Teachers of Science or Technology.

(c) These awards may not be held concurrently with a Local Science Exhibition, or with any of the Board's Scholarships, &c.; but, subject to the sanction of the Board, they may be held concurrently with other Scholarships or aid granted by Local Authorities.

SHORT COURSES OF INSTRUCTION IN SCIENCE FOR TEACHERS.

35. Short courses of instruction in Science are given at the Imperial College of Science and Technology during July or August for a limited number of Teachers whose preliminary training enables them to profit by instruction in courses related to their work.

36. A selected candidate will receive third-class railway fare for one journey from his home to London at the beginning and for one journey from London to his home at the end of the course, also a grant at the rate of £17 a week up to a maximum of £37 towards his expenses while attending the course. In the case of teachers resident in London or its vicinity a reduction is made in the grant.

Information as to the precise period of these courses and forms of application for admission are circulated about April.

ASSISTED STUDENTSHIPS AT UNIVERSITIES AND UNIVERSITY COLLEGES.

37. Aid is granted to a limited number of teachers engaged in science teaching who are selected to attend for instruction at certain Universities and University Colleges, but the Board do not, as a rule, make payments in aid of

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fees for attending Evening Classes at those Institutions. Particulars of the courses of instruction and of the nature and conditions of the Board's assistance will be sent on application.

ALLOWANCES PAID TO SCIENCE TEACHERS WHO ARE
SENT ABROAD, OR WHO TRAVEL IN THE SERVICE
OF THE BOARD.

38. Science Teachers who are sent abroad, or who travel in the service of the Board, receive 10s. a night while required to be absent from home, second-class railway fares, and cab or omnibus fares.

TRAVELLING EXPENSES OF STUDENTS ATTENDING THE
IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY
WITH THE AID OF THE BOARD.

39. When any student who is attending the Imperial College of Science and Technology with the aid of the Board is directed to attend elsewhere for instruction or practice, he may be allowed the cost of travelling within certain limits.

L. A. SELBY-BIGGE.

TIME TABLE OF EXAMINATIONS FOR ROYAL SCHOLARSHIPS AND FREE STUDENTSHIPS, 1915.

Qualifying Examinations.

Date.	Day of the Week.	Time.	Subject.
1st March	Monday	7-9.30 p.m.	Freehand Drawing.
2nd "	Tuesday	7-10 p.m.	Magnetism and Electricity.
3rd "	Wednesday	7-10 p.m.	Mechanics (Solids).
4th "	Thursday	7-10 p.m.	Mechanics (Fluids).
5th "	Friday	7-10 p.m.	Sound, Light and Heat.
6th "	Saturday	6-10 p.m.	English.
8th "	Monday	7-10 p.m.	Chemistry.
9th "	Tuesday	7-10 p.m.	Mathematics.

Competitive Examinations.

1st May	Saturday	2-10 p.m.	Practical Metallurgy (Higher Examination).
		5-10 p.m.	Practical Metallurgy (Lower Examination).
3rd "	Monday	7-10 p.m.	Sound and Light. Mineralogy.
4th "	Tuesday	2.30-10.30 p.m.	Practical Inorganic Chemistry (Higher Examination).
		5.15-10.30 p.m.	Practical Inorganic Chemistry (Lower Examination).
5th "	Wednesday	7-10 p.m.	Theoretical Mechanics (Fluids). Zoology.
6th "	Thursday	7-10 p.m.	Theoretical Mechanics (Solids). General Biology.
7th "	Friday	7-10 p.m.	Magnetism and Electricity. Botany.
10th "	Monday	7-10 p.m.	Pure Mathematics, Lower, and Higher—Paper I.
11th "	Tuesday	7-10 p.m.	Pure Mathematics, Higher—Paper II.
12th "	Wednesday	7-10 p.m.	Heat. Theoretical Organic Chemistry.
13th "	Thursday	7-10 p.m.	Theoretical Metallurgy. Theoretical Inorganic Chemistry.
14th "	Friday	7-10 p.m.	Practical Organic Chemistry (Higher Examination).
		2.30-10.30 p.m.	Practical Organic Chemistry (Lower Examination).
15th "	Saturday	6-10.30 p.m.	Building Construction. Naval Architecture.
		6-10 p.m.	Machine Construction and Drawing.
17th "	Monday	7-10 p.m.	Practical Mathematics.
18th "	Tuesday	7-10 p.m.	Applied Mechanics (Materials and Structures). Human Physiology.
19th "	Wednesday	7-10 p.m.	Applied Mechanics (Machines and Hydraulics).
20th "	Thursday	7-10 p.m.	Heat Engines. Geology.

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BOARD OF EDUCATION.

EDUCATION (CHOICE OF EMPLOYMENT) ACT, 1910.

REGULATIONS

providing for

Grants in aid of Local Education Authorities in England and Wales exercising powers under the Education (Choice of Employment) Act, 1910.

(In force from 1st April, 1913.)

Presented to both Houses of Parliament by Command of His Majesty.



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BOARD OF EDUCATION.

Regulations providing for Grants in aid of Local Education Authorities in England and Wales exercising powers under the Education (Choice of Employment) Act, 1910.

1. If the Board of Education are satisfied that a Local Education Authority is efficiently exercising powers under the Education (Choice of Employment) Act, 1910, in accordance with an approved scheme, they may contribute by way of grant to the extent of half the Authority's recognised expenditure upon the salaries of Officers employed in recognised duties under the scheme.

2.—(a) The maximum annual expenditure which will be recognised for this purpose will be determined in accordance with the number of children between 12 and 13 years of age on the registers of the Public Elementary Schools in the areas for Elementary Education within which the powers are exercised, as last returned to the Board before the beginning of the financial year in which the grant is due to be made.

(b) Expenditure will be recognised in respect of each such area for Elementary Education separately in accordance with the following scale:—

No. of Children.	Maximum recognised Annual Expenditure on Salaries.
	£
Under 500	50
500 and under 1,000	100
1,000 and under 2,000	200
2,000 and under 5,000	300
5,000 and over	400

(c) If the powers are exercised within part only of an area for Elementary Education, the maximum expenditure upon salaries recognised in respect of that area will be reduced so as to correspond with the proportion of the number of children between 12 and 13 years of age on the registers of Public Elementary Schools situate within that part of the area to the number for the whole area.

3. Grants may be made in respect either of Officers employed by the Authority entirely in such duties under the Education (Choice of Employment) Act as the Board may recognise as suitable to be aided by them, or of Officers employed partly in such duties and partly in other duties under the Authority. In all cases of part-time employment the Board will require a proportionate part of the total salaries paid by the Authority to Officers so employed to be allocated definitely to duties under the Education (Choice of Employment) Act.

4. Grant will ordinarily be paid towards the end of each financial year in respect of recognised expenditure upon salaries towards which the Board have not previously contributed. In paying grant for the first time to an Authority the Board will take into account expenditure upon salaries since the date of the approval of the Authority's scheme by them, or such other date as the Board may exceptionally fix.

5. Grant will ordinarily be payable to the Local Education Authority for Higher Education, but if the Council of a Borough or an Urban District, by agreement with the Council of a County, exercise the powers of the County Council within the Borough or Urban District, the Board may with the consent of the County Council pay grant to the Council of the Borough or Urban District.

6. All reports, returns, and other particulars, statistical and financial, called for by the Board from any Local Authority claiming grant under these Regulations must be duly made.

7. The decision of the Board as to the application or interpretation of these Regulations and as to whether the conditions have been fulfilled in any case is conclusive.

8. These Regulations are in force from 1st April 1913.

L. A. SELBY-BIGGE.

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BOARD OF EDUCATION.

REGULATIONS DEALING WITH GRANTS AND LOANS IN AID OF MUSEUMS, EDUCATIONAL EXHIBITIONS AND SCHOOLS.

Presented to both Houses of Parliament by Command of His Majesty.



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Part IV. of the Regulations for Technical Schools, Schools of Art, and other forms of provision of further education in England and Wales (in force from 1st August 1909 to 31st July 1910) [Cd. 4736] dealing with Grants and Loans in aid of Museums, Educational Exhibitions, and Schools, will be continued in force pending the issue of a revised body of rules dealing with these matters.

L. A. SELBY-BIGGE.

13th August 1913.

SPECIAL STUDENTSHIPS FOR TEACHERS OF ART.

14. The Board are prepared to nominate a *limited number* of Teachers of Schools of Art or Art Classes for attendance at courses of *advanced* instruction at the Royal College of Art. A Candidate for these Studentships must be a British subject and must hold the Art Master's Certificate, Group I.

These awards may not be held concurrently with a local Science or Art Exhibition or any of the Board's Scholarships, etc., but, subject to the sanction of the Board, they may be held concurrently with other scholarships or aid granted by Local Authorities.

15. Teachers selected for these awards are nominated in the first instance for a term or for a session, but if in the case of anyone so nominated the Board consider it desirable to prolong the period of his instruction in the college his tenure of the studentship may be extended for further terms, so however that it shall not continue for more than two years in all.

16. Teachers holding these awards will be entitled to free admission to the work of the approved course at the Royal College of Art, to a maintenance allowance of 60*l.* a year for the duration of the courses to which they are nominated, and to third-class railway fare for one journey per session between their homes and London.

17. Candidates for these awards should have sufficient knowledge of Art to enable them to enter at once upon the courses to which they are nominated, and will be required to furnish on the prescribed form particulars of their education and training and teaching experience.

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PART IV.

GRANTS AND LOANS IN AID OF MUSEUMS,
EDUCATIONAL EXHIBITIONS, AND
SCHOOLS.

Note.—All communications under the two following Chapters should be addressed to the Secretary, Circulation Collections, Victoria and Albert Museum, South Kensington, London, S.W. :—

CHAPTER 10.

GRANTS IN AID OF PURCHASES BY LOCAL MUSEUMS.

84.—(i) The grants are primarily intended to assist Provincial Museums in purchasing reproductions, in plaster or by electrotpe or other process, of objects illustrating architectural, ornamental, and other decorative Art.

Grants may also be made towards the purchase of original objects of similar character, but in considering applications, preference will as a rule be given to those for reproductions.

*Grants may also be made towards the purchase of objects illustrative of scientific investigations.

This aid is not given in respect of appliances and examples such as are necessary to the equipment of Schools or Classes approved by the Board.

In no case will the grant be made until the objects have been approved by the Board.

(ii) Where the Managers are not the Local Education Authority of the area in which the Museum is situated, the Board may consult the Local Education Authority before making a grant.

When there are two or more Museums in the same locality, the Board will consider the provision of Museum facilities in the locality as a whole, and the allocation of interests among the several Museums.

* The arrangements for these grants and for the loan of illustrative collections of scientific apparatus under Art. 85 below are under revision.

84.—(cont.)

(iii) Application for the Board's approval of the objects towards which aid is desired must be accompanied by—

(a) Information of the objects in detail, together with their cost. In cases where the application to the Board has not been made prior to the acquisition of the objects, its consideration will be exceptional, and in no case will a grant be made in respect of an object after twelve months from its acquisition.

(b) Where not already supplied to the Board, a copy of the rules under which the Museum is administered, including those for the admission of visitors and of students.

(iv) No grant is made towards the cost of carriage of the objects; and no object in respect of which aid has been granted may be sold or exchanged without the permission of the Board.

(v) The grant will in no case exceed one-half the cost of the objects purchased; and it must be met by at least an equal amount raised locally by rate or contribution, exclusive of any sum received under the Local Taxation (Customs and Excise) Act, 1890.

(vi) When the Board's approval has been given, the grant will be paid upon the receipt of the Certificate Form 132a.T. supported by the original vouchers with the receipts of the vendors, and copies in duplicate thereof.

(vii) The Museum in which the objects are exhibited must be at all times open to the inspection of the Officers of the Board.

(viii) A report on the Museum, containing a return of the number of persons who have visited it during each month, must be forwarded annually to the Board as soon as possible after the 31st December.

(ix) All applications must be made before October 1st in each year on Form 132.T.

(x) It must be understood that a grant cannot necessarily be made by the Board in all cases where it can be shown that the objects proposed to be purchased are such as could be approved for the purpose by the Board, and that the foregoing conditions would be fulfilled.

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CHAPTER 11.

LOANS TO MUSEUMS, EDUCATIONAL EXHIBITIONS,
AND SCHOOLS.

85. Collections of objects of Art* may be lent to Museums, Educational Exhibitions and Schools approved by the Board, on the following conditions :—

(i) That the objects lent by the Board are supplemental to others of a similar nature contributed by the locality.

(ii) That adequate provision, previously approved by the Board, is made for their exhibition.

(iii) That their security and safe return are guaranteed. Valuable original objects will only be lent to Institutions in which efficient arrangements are made for their safe custody; one condition being that a sufficient number of attendants will be employed to patrol the premises containing the loan collections during the whole day and night.

(iv) That they are insured against all risks for the period of their absence from the Board's custody.

(v) *Applicable only to Permanent Museums :*

(a) That the Museum consists of at least one room entirely devoted to the exhibition of objects.

(b) That the Museum is open to the public, both during the day-time and in the evening, and is open free at least one day and one evening in each week.

(c) That the receipts, if any, are applied for the benefit of the Museum.

(d) That the Municipal or Local Authority pay, in respect of the expenses, a fixed charge of fifty shillings for each van needed to convey the objects to the Museum, and defray any local expenses; and that they provide sufficient assistance for the proper arrangement of the collection.

(vi) *Applicable only to Temporary Exhibitions :*

(a) That the Exhibition is open to the public, both during the day-time and in the evening.

* See note on page 58.

85.—(cont.)

(b) That arrangements satisfactory to the Board are made for the free admission of students, and for the admission of artisans who are not students at a reduced rate on certain evenings; and that in the event of the Exhibition remaining open more than three months it is free at least on one day and one evening in each week.

(c) That any surplus in the receipts is applied for the benefit of the School or Museum with which the Exhibition is connected.

(d) That the Managers, or the Municipal or Local Authority pay, in respect of the expenses, a fixed charge of fifty shillings for each van needed to convey the objects to the School or Educational Exhibition, and defray any local expenses; and that they provide sufficient assistance for the proper arrangement of the collection.

(vii) The Board may require that any application for a loan under this Article shall be supported by the Local Education Authority.

(viii) The Board will consult so far as possible the wishes of applicants as to the nature of objects to be lent, but will themselves decide in every case as to the lending of objects, or the continuance of any loan.

(ix) If any object be received in a damaged state, when not in charge of an officer of the Board, a report of its condition should immediately be sent to the Board.

(x) Glass cases for the objects belonging to the Board which require protection, will be provided by the Board, and every object will be accompanied by a descriptive label. Such glass cases must on no account be moved except under the supervision of the officers of the Board.

(xi) In the case of Permanent Museums, the collections lent from time to time by the Board will be withdrawn in each case at the expiration of not less than twelve months.

(xii) Applications for loans under this article should be made on Form 605 Ciren.

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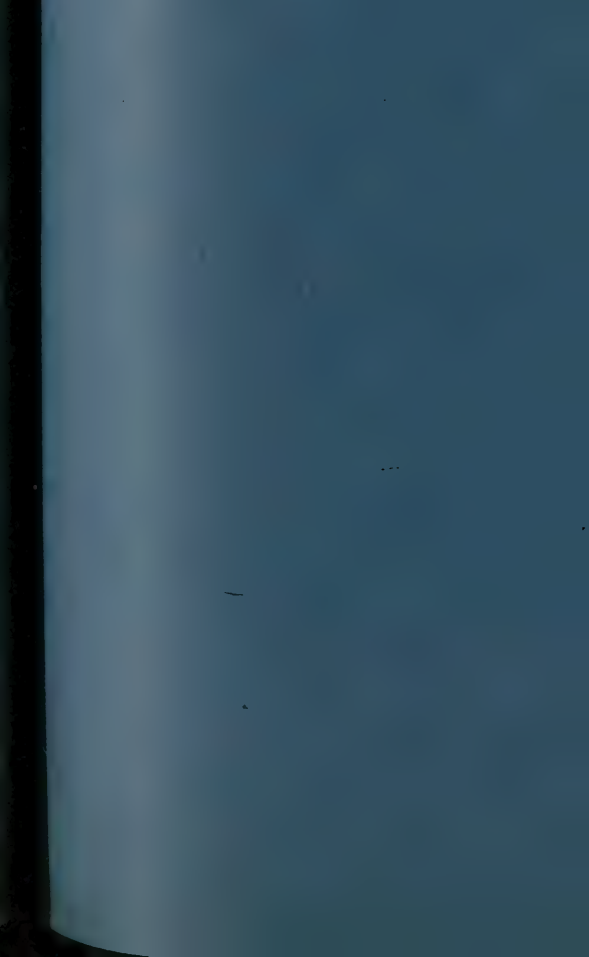
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BOARD OF EDUCATION.

REGULATIONS

FOR THE

TRAINING OF TEACHERS

FOR

ELEMENTARY SCHOOLS.

(In force from 1st August 1913.)

Presented to both Houses of Parliament by Command of His Majesty.



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 Circular on Education (Provision of Meals) Act, 1906. [Circular 552.] Price 1d.; by post, 1½d.
 Memorandum on Medical Inspection of Children in Public Elementary Schools. [Circular 576.] Price 2d.; by post, 2½d.
 Circular on details of Medical Inspection, with specimen schedule for report on Child. [Circular 582.] Price 1d.; by post, 1½d.
 Circular on Medical Inspection, including functions of School Medical Officer, Local Education Authority's Report, &c. [Circular 596.] Price 1d.; by post, 1½d.
 Syllabus of Physical Exercises for Schools. Price 9d.; by post, 1s.

Elementary.

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 England; or Wales, Circular 63. Price 1d.; by post, 1½d.
 List of Public Elementary Schools, &c., in England. [List 21.] Price 2s. 6d.; by post, 2s. 11d.
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BOARD OF EDUCATION.

REGULATIONS

FOR THE

TRAINING OF TEACHERS

FOR

ELEMENTARY SCHOOLS.

(In force from 1st August, 1913.)

Presented to both Houses of Parliament by Command of His Majesty.



LONDON:

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE.

To be purchased, either directly or through any Bookseller, from
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REGULATIONS FOR THE TRAINING OF TEACHERS FOR ELEMENTARY SCHOOLS.

PREFATORY MEMORANDUM.

1. The Regulations for this year provide for substantial changes with regard to the curriculum and examinations of students who will follow the ordinary Two Years' Course. The provisions at present in force with regard to the courses to be taken by these students are in their main lines the same as those which were laid down when the Training College Regulations were first issued as a separate volume in 1904. In the intervening nine years the conditions under which intending teachers receive their preliminary education and training have been largely altered. In 1904 only a small minority of the students entering the Training Colleges had been educated in Secondary Schools, and the greater number had been engaged for half their time in teaching from the age of 15 or earlier. In 1911 and 1912 nearly 40 per cent. of the students entering Training Colleges had continued their education in Secondary Schools till the age of 17, and it may be expected that this proportion will increase in the future. This change has an important bearing on the task to be performed by the Training Colleges. The Colleges have in the past, as a natural result of the conditions under which they came into existence, aimed not only at providing a training in the stricter sense of the word for the profession of teacher; but also at continuing the student's general education; and the second of these functions has in many cases appeared quite as necessary as the function of training in the stricter sense. Thus the Board's Regulations have continued till now to require that every student, with the exception of a minority of students who were working for a Degree, should during his training receive instruction in the ordinary subjects of a Secondary School education, in so far as these subjects are needed for the work of teaching in the Elementary School.

2. The developments of the last few years, however, have now led to a state of things in which the majority of students entering the Training Colleges may be expected to have received four years' education at a Secondary School, while many of the remainder will have continued their full-time education up to the age of 16. In these circumstances, while it will still be desirable that the Training Colleges should to some extent continue to supplement the general education of the students, it is no longer necessary that every student during his Training College course should be required to continue to study all the

main school subjects. This change allows time for a further development of the work of the Colleges on their professional side, the need for which has for some time past been increasingly felt. The postponement of the age at which an intending teacher is introduced to the work of teaching in an Elementary School has made it desirable that a larger amount of time should be given to practical work in teaching in the Training Colleges. The importance of the study of the Principles of Teaching is being more fully realised, and the conception of the ground to be covered in this subject has been enlarged. Finally, it has been found necessary to add to the equipment of the Elementary teacher a knowledge of subjects not required in the past, such as Hygiene and Physical Training. Thus the demands made on the student's time by the professional side of the training have increased considerably, and there is at present as a result of this a danger of over pressure, which can only be removed by some lightening of the requirements made on the side of general education.

3. The problem has for some time past received the consideration both of the Board and its Officers and of the Training College Authorities. In putting forward the proposals embodied in this year's Regulations, the Board have had the advantage of discussing the questions involved with representatives of the Training Colleges acting through their Association, and they hope that the new proposals will commend themselves in their general lines to those who are engaged in the training of Elementary School Teachers. The principal object aimed at is to reduce the pressure on the time of the students by avoiding a repetition of work done in the Secondary Schools, and thus to increase the time available for professional training. It is hoped to secure this (a) by reducing the number of subjects which students are required to study as part of their general education; (b) by reducing the amount of ground that has to be covered in the case of some of the syllabuses; (c) by providing for one examination only (instead of two as hitherto) in those cases in which students take advanced work in a subject in addition to the ordinary work; and (d) by allowing more freedom as to dividing the examination as a whole between the first and second years.

4. To this end the subjects that are or may be included in the Training College curriculum are classified as Professional Subjects, General Subjects, and Additional Subjects. The Professional Subjects include those which are in the view of the Board essential to the professional equipment of all teachers in Elementary Schools. They are the following:—The Principles and Practice of Teaching, Hygiene and Physical Training, Theory of Music and Singing, Reading and Recitation, Drawing, and Needlework (for women). Theory of Music and Singing may be omitted by students who are incapable of profiting by

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practical instruction in Music; and Hygiene and Physical Training may be omitted by students taking Degree Courses in certain cases in which the requirement of these subjects together with the Degree work would involve an undue pressure on the student's time. Apart, however, from these strictly limited exceptions, the Board expect that the Professional Subjects as a whole should be studied by all students, whether Two Year students taking an ordinary course or students reading for University Degrees.

5. The subjects classified as General Subjects are English, History, Geography, Mathematics, and Elementary Science. To this is added Welsh in the case of Welsh Colleges. The Regulations have hitherto required that Two Year Students should continue the study of all these subjects with a view to completing their general education. In future students will not be required to study more than three subjects of this group from this point of view; and in certain cases, with the special approval of the Board, this number may be reduced to two. This latter provision is particularly intended to meet the case of a student who desires to specialize on a certain side of the professional work. The selection of the subjects for special study is left to the Training College Authorities, subject to the general condition that some attention must in all cases be given to the study of English. All students are expected to give some attention to English Composition and to write an English Essay; and English Literature must be taken by all students, except those taking Advanced Courses in History, which provide for the study of a certain number of works of literature from the historical point of view. The Regulations add that the instruction in the Principles and Practice of Teaching must include instruction in the methods of teaching all the subjects ordinarily taught in an Elementary School, and must in particular provide in the case of each student for instruction in the methods of teaching each of the General Subjects, so far as this is necessary for work in Elementary Schools, whether they are selected for the student's own special study or not. The Board anticipate that Training Colleges will usually find it advisable to devote a considerable portion of the spare time which will result from these changes to giving instruction on the special methods of teaching particular subjects.

6. The Additional Subjects include certain subjects which are not ordinarily needed by Elementary School Teachers, but which may in certain cases be included in the Training College curriculum, either because they would be useful for teachers in schools of a special type, or because the student may desire to study them with a view to improving his own general education. This group includes French, German, Latin, Physics, Chemistry, Botany, Rural Science, and Housecraft. Certain other subjects for which provision was formerly made in the Regulations have now been omitted from the list, on the ground that they were

seldom studied in a Training College, and if studied would more properly be taken as part of a Degree Course.

7. Hitherto a compulsory course has been prescribed for each one of the regular subjects which every student has been bound to take, and students wishing to carry the study of a subject further have in addition been allowed to take an "optional" course. This has involved a double examination for the students concerned. It is now proposed to substitute an arrangement under which a student will take in any subject either an Ordinary Course or an Advanced Course, but not both. Ordinary Courses are recognised in all the General Subjects and in all the Professional Subjects. Advanced Courses, as well as Ordinary Courses, are recognised in all the General Subjects other than Elementary Science (in which case the place of an Advanced Course is taken by the special Advanced Courses in Physics, Chemistry, Botany, and Rural Science) and in the Principles of Teaching, Music and Drawing. In the Additional Subjects, Advanced Courses only are recognised. In some cases, as in the Professional Subjects, the Advanced Course includes the whole of the corresponding Ordinary Course. In other cases, as in some of the History Courses, it covers only a part of the same ground. It is anticipated, however, that in any case the pressure on the student will be lessened to some extent by the fact that he will only have to take one examination in the subject instead of two.

8. It will be seen that a large amount of liberty is allowed under these Regulations as to the subjects which are to be taken by individual students. The choice as to this will be left to the College Authorities acting on their knowledge of the tastes and powers of the particular student. A weak student may confine himself, apart from the professional side of his work, to a study of the Ordinary Courses in three (or in special cases two) of the General Subjects, such as English, History, and Elementary Science; and it will be observed that, if Elementary Science is taken as one of the three, the student will only be required to present himself for a written examination in two subjects. On the other hand, a strong student may take, in addition to his professional work, Advanced Courses in five General or Additional Subjects, as for instance, in English, History, Mathematics, Physics, and Chemistry. It will again be possible for the College Authorities, if they think it desirable in a particular case that a student should supplement his knowledge of the main subjects of the school curriculum as a whole, to recommend that he should take Ordinary Courses in the five subjects of English, History, Geography, Mathematics, and Elementary Science. The Board contemplate, however, that the cases in which a student will study more than four of the General or Additional Subjects will be exceptional; and they are disposed to think that College Authorities would in general

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do well to recommend students to study only the minimum number of General Subjects required, and that the better students would gain more by substituting an Advanced Course for the corresponding Ordinary Course than they would by increasing the number of subjects taken. This, however, is a matter which the Board are prepared to leave very largely to the discretion of the College Authorities, though it may become necessary for them to call the attention of the Authorities to particular cases if it appears that students are allowed to take up more Advanced Courses than they can study with profit.

9. As regards the division of the work between the first and second year, the Board propose again to leave a wide discretion to the Training College Authorities. On this subject there are two different points of view that may be taken up. According to one view it is desirable that the course should be divided into two distinct parts, the first year being given to study of the General Subjects, and the second year being devoted entirely to professional work. Such a view is in the main consistent with the provisions of the Regulations, and the Board would have no objection to its being adopted by any College which prefers it, though they think it advisable that a certain amount of teaching practice should be introduced in the first year's work in order that the College Authorities may have an early opportunity of forming some opinion as to the teaching capacity of the students. Another view is that the Two Years' Course should be considered as a single whole, and that all the subjects provided for should be studied throughout from a professional point of view, subjects such as English or History no less than those which are classified as professional in the narrower sense. When this view is held it may be desired to defer the examination in as many subjects as possible to the end of the second year, and the Regulations allow large freedom in this direction also. The Board have had some doubt as to whether students should be allowed to enter for an examination on an Advanced Course at the end of the first year, but they have decided that there is not sufficient reason to refuse to Colleges the liberty to make proposals to this effect, though cases in which a student can profitably complete an Advanced Course by the end of his first year will probably not be very numerous. In 1914, however, it will be impossible for administrative reasons for the Board to examine any student in an Advanced Course.

10. At present marks of distinction are awarded to students who reach a high standard, whether in "compulsory" or "optional" subjects, and pass marks may also be awarded to students who have obtained a fair amount of success in the "optional" subjects. Apart from this no record of the subjects taken by each particular student has appeared on the Certificate awarded to him. The new system makes some change in these arrangements necessary. In view of the fact that students will no

longer be required to study all the staple subjects of the school curriculum, it becomes important that the Certificate should give as full information as possible as to the subjects which have been included in the course of study of each student. It is proposed accordingly that the Certificate issued to each student should in future give the following information :—

- (a) The Certificate will state all the subjects included in the course of the student, with the exception of those subjects, if any, in which the student's work is considered to have been altogether worthless. A subject taken by the student will not in general be omitted from this part of the Certificate unless the College Authorities consider that it ought to be omitted and their judgment is confirmed either by the results of the Board's examination or, in the case of subjects in which there is no written examination, by the Inspector who visits the College.
- (b) In addition to this, the Certificate will specify any subjects in which the student has obtained a pass with credit. The Board propose to allow a pass with credit for reasonably good work in each of the Ordinary Courses on which a written examination is held and in each of the Advanced Courses. The question as to whether a pass with credit should also be allowed in the subject of Elementary Science, in which no written examination is held, is reserved for further consideration.
- (c) It will also be possible for students taking an Advanced Course to obtain a pass with distinction, which will be recorded on the Certificate. The pass with distinction will be reserved for cases of exceptionally good work. It is proposed to abandon the practice of awarding a pass with distinction for success in the Ordinary Courses, since confusion would be likely to arise between the standard indicated by a pass with distinction in the Ordinary Course and the standard indicated by a pass with credit in the Advanced Course.

In the case of those subjects, such as English and the Principles of Teaching, in which the Advanced Course includes the Ordinary Course, it will be possible for a student who takes the Advanced Course, but fails to reach the standard for a pass with credit in that course, to be awarded a pass with credit in the Ordinary Course if he shows adequate proficiency in the more elementary parts of the subject. This would not, however, be possible in the case of some of the History courses, in which the ground covered by the Ordinary Course is not covered by the Advanced Course.

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11. The syllabuses of the various subjects are now grouped together in a single Appendix to the Code, instead of, as formerly, in two appendices relating to the "compulsory" and "optional" subjects respectively. The following may be noted as the main changes in the various syllabuses:—

- (a) *English*.—The Advanced Course in this subject includes the Ordinary Course. One course only is provided in place of the five courses provided by the former Regulations, but the new course admits of so much variation within its limits that it is hoped that Training Colleges will find they have as much freedom in selecting books that they consider suitable, as they possess at present. The work of the Ordinary Course is expected to be somewhat less extensive in amount than the work of a shortened course under one of the ordinary schemes of study contained in the present Regulations.
- (b) *History*.—Provision is made for four alternative Ordinary Courses in this subject. The first three of these correspond to the three schemes at present in force which are most often taken by the Training Colleges. The amount of ground that is required to be covered is not in any case more than that at present prescribed for a shortened course, and in some cases the amount has been reduced. The fourth scheme is new. Corresponding to the four Ordinary Courses are four Advanced Courses, the latter admitting of further variation within their limits so as to allow of nine alternative Advanced Courses in all. Each of the Advanced Courses corresponds to one of the Ordinary Courses in such a way that students taking the two courses may work together up to a certain point. Some of the Advanced Courses provide for the study of certain works of English Literature. Students taking these courses will not be required to take the examination in English Literature, though they will be required in all cases to write an essay. Further information as to any course or courses which it is proposed to take will be supplied on application to the Board, with suggestions as to books which the Board recommend.
- (c) *Geography*.—Provision is made for two alternative Ordinary Courses. One of these is intended to be taken by those Colleges which wish to combine as far as possible the teaching of History and Geography, and provides for the study of England and Wales from this point of view. The other course provides for a general training in geographical principles and lays less stress on History, but it is not intended that the historical side of the subject should be altogether

left out of sight in this course. To each of these Ordinary Courses corresponds an Advanced Course, the two being related in such a way that students taking the two courses may work together up to a certain point.

- (d) *Mathematics*.—In the past the Regulations have provided separate courses in Mathematics for women and for men, the course for men covering rather more ground than the course for women. Now that Mathematics will no longer be a compulsory subject, it becomes unnecessary to retain this distinction. Only one Ordinary Course and one Advanced Course are accordingly now provided, the Advanced Course including the Ordinary Course. The Ordinary Course now provided is in the main the same as the course prescribed in the past for men students. The binomial theorem, permutations and combinations have, however, been removed from the syllabus, and some elementary Trigonometry has been introduced into it. The Advanced Course includes, in addition to the Ordinary Course, the ground covered in the "optional" course provided for in previous Regulations, but it is intended that the examination paper shall be considerably easier than that which has been set on the "optional" course in recent years.
- (e) *Elementary Science*.—A Syllabus of an Elementary Course in Physics and Chemistry is included in the Regulations to serve as a general indication of the ground which students will be expected to have covered before entering on an Advanced Course in Science. But the inclusion of this Syllabus is not intended to restrict in any way the freedom which Colleges have possessed as to drawing up their own Syllabuses of instruction in Elementary Science.
- (f) The Syllabus for *Elementary Welsh* and for *Higher Welsh* respectively is the same as hitherto, with the exception that the course for Higher Welsh now becomes an Advanced Course including the Ordinary Course, in accordance with the general principle underlying the new system. Students taking the Advanced Course will accordingly take one examination only, instead of two as hitherto.
- (g) *The Principles of Teaching*.—The Regulations at present provide for four alternative Syllabuses in this subject. The new Regulations provide for only one Syllabus, which is practically the same as that numbered 4 in the present Regulations. This Syllabus virtually covers all the ground covered by Syllabuses 1, 2, and 3, and contains little which these three do not contain. The Syllabus retained sets out in detail the ground that is

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common to all the existing Syllabuses, and at the same time leaves the College instructors free to prescribe their own treatment. The examination papers will be so framed as to allow of this. It is thought, therefore, that the reduction in the number of Syllabuses will in no way restrict the College liberty of teaching, while it will simplify very considerably the arrangements for the examination. The Advanced Course in the Principles of Teaching will include the Ordinary Course in all cases, and will provide in addition for the study either of a selected book, or of the special method of teaching one of the main subjects of the Elementary School Curriculum, or for a fuller treatment of certain sides of the training of young children.

(h) No changes of substance have been made in the other syllabuses.

12. Third Year Students are at present required to make some further study of Education during their third year of training. No definite guidance has been given in the Regulations as to the form which this course of study should take or as to the nature of the test which should be satisfied by the student at the end of the course, and the Board are disposed to think, from an inspection of the papers worked recently by Third Year Students in this subject, that the character of the work done has suffered on the whole from the want of a sufficiently clear aim. They are proposing accordingly to require that students taking a Third Year of training at a Training College in England or Wales should, as part of their course, make both a special study of a selected book and also a more detailed study of one of the subjects ordinarily taught in a Public Elementary School or of the methods of training young children, and that they should be examined by the Board on this part of the Third Year Course. It is contemplated that a Third Year Student should also undertake some piece of educational study to be suggested by the Training College Authorities for the approval of the Board, and to be tested by the College Authorities. With regard to this part of the student's work, the Board desire to leave the College Authorities as much freedom as possible. The Board will pay special attention to both these parts of the student's course in Education in deciding whether the student can be regarded as having completed his Third Year satisfactorily.

13. The Regulations have hitherto stated that a Two Year Student must spend at least six weeks of his course of training in the practice of class teaching, and have required this to be extended to twelve weeks in the case of students who have not had practical experience previous to entering the College as teachers in Elementary Schools in some capacity recognised by the Board. The Board are now proposing to state that students

who have not had practical experience as teachers in Elementary Schools in some capacity recognised by the Board before entering the Training College will be required to spend at least twelve weeks during their course of training in class teaching; and that, in the case of students who have had such practical experience before entering the Training College, the period to be given to practice in class teaching may vary from six to twelve weeks, as may be determined by the College Authorities in view of the circumstances of the particular case. The Board do not intend by this alteration of the wording of the Regulations to require any extensive changes to be carried out at present as to the arrangements for practice in Training Colleges. The alteration, however, will help to enforce the general principle that the primary function of a Training College is to afford a professional training to persons who are intending to be teachers. The Board are satisfied that the minimum period of six weeks at present required is by no means sufficient in the case of all students who have had some practical experience as teachers before entering the College, and they hope that the change will strengthen the hands of the Training College Authorities in dealing with these. The Board propose to allow Training College Authorities a large amount of freedom as to the amount of school practice which they will require from individual students, in view of all the circumstances of the case, including the extent and character of the student's previous teaching practice, the opinion formed by the College Authorities as to his competence as a teacher, and the facilities available for effective school practice. But it should not any longer be considered that a student can claim to have his school practice reduced to less than twelve weeks merely on the ground that he has had some teaching experience before entering the College. Permission is now further given to reduce the amount of school practice in particular cases, with the special sanction of the Board, below the minimum of six weeks hitherto required. This permission is designed to meet exceptional cases in which it has been proposed to admit to a Training College for a Two Years' Course either Certificated Teachers or Uncertificated Teachers of several years' standing; and it is intended that the permission given should be confined strictly to cases of this kind.

14. Some changes are introduced this year into the Regulations affecting the position of students who fail to qualify for the Certificate at the end of their period of training, and who are required to pass a further examination as a condition of obtaining the Certificate. The changes made may be summarised as follows:—

- (a) Students who take the Board's Final Examination at the end of their Training College Course will be required to enter a second time for that Examination, supplemented by such further tests as may be needed in

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particular cases, instead of entering for the Certificate Examination for Acting Teachers.

- (b) Students who fail on account of weakness in part of the examination only will not necessarily be required to take the whole Examination over again, but will, under certain conditions, be allowed to qualify by passing in that part of the Examination in which they failed.
- (c) Students who take in their Training College Course an alternative examination, and fail in that examination, may enter either for that examination, or for the Board's Final Examination, under the conditions stated above.
- (d) Students who have passed an intermediate Examination for a University Degree, and have failed in the Final Examination for the Degree only, may be awarded the Certificate, without passing a further academic examination, if they are specially recommended by the College Authorities.
- (e) The period of temporary recognition will be extended from one year and nine months to two years and six months.

In accordance with the general principle stated in Article 79 (a) these changes are only made applicable by the Regulations to Students admitted in 1913, but it is provided by Article 79 (b) that they may at the request of the Authorities of any College be applied with any necessary modifications to Students admitted from 1912 or from any earlier date.

15. The Board have been considering further the difficulties as to the distribution of the supply of teachers which arise from the fact that the great majority of students at present enter Training Colleges in the Autumn: They are anxious to encourage arrangements by which the output of teachers will be distributed more evenly over the year, and they have been in communication with representatives of the Training Colleges and Local Education Authorities with regard to this question. The Board understand that the Authorities of particular Training Colleges consider that they will find it difficult to make a change in their dates of entry, except as part of a considered scheme affecting the country as a whole. In order to facilitate the adoption of such a scheme, the Board have inserted words in Article 12 (b) of the Regulations, providing that they may, if they think fit, reconsider from time to time in any case their approval of the date on which the academical year of the Training College begins. They do not, however, propose to take action under this provision, except after full consultation with the Training Colleges that would be affected.

16. The changes in the Regulations as to Courses of Study and Examinations referred to above have involved substantial

alterations in Chapter II. of the Regulations, which relates to the courses taken by Two Year Students; and consequential changes arising out of them have also been necessary in Chapters III., IV., V., VI., VII., and VIII., which relate to the courses of study taken by other students and to Result Lists and Certificates. Appendix C., which sets out the Syllabuses on which the Board's Examination will be held, and which replaces Appendices C. and D. of previous Regulations, has also been largely altered. The Syllabuses in which the most important changes have been made are mentioned in paragraph 11 above. Some changes have been made in Appendices A. (I.) and (II.,) which give the lists of examinations qualifying for admission to a Training College, and in Appendix H., which refers to the planning of Training Colleges and Hostels. The Appendix to the "Statement of Grants available from the Board of Education in aid of Technological and Professional Work in Universities in England and Wales" has, for convenience of reference, been printed as Appendix D. of these Regulations, and the paragraphs from the Statement which relate to the grants payable on account of Four Year Students have been printed as Article 61 of the Regulations. Other changes will be found in Articles 6 (a), 11, 12, 55, 57 and 79 of the Regulations, and in Clauses 1, 2, and 6 of the Form of Undertaking printed in Appendix B. With the exception of the alterations in Articles 12 (b) and 79, referred to in paragraphs 14 and 15 above, these changes are of minor importance.

17. The Board hope that the changes introduced in the new Regulations will open the way to substantial improvements in the work of the Training Colleges. It should, however, be understood that they are mainly in the direction of allowing greater freedom, and that they do not require any important modifications of the existing arrangements to be introduced immediately. The Board anticipate that Training College Authorities may in some cases wish to defer any large changes until 1914, so as to obtain time for further consideration, and in the meantime to allow the present arrangements to continue without more changes than are necessary. The Board will in administering these Regulations be ready to meet, so far as possible, the views of any Training Colleges that may wish to adopt this course.

L. A. Selby-Bigge

May 5, 1913.

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REGULATIONS

FOR THE

TRAINING OF TEACHERS FOR ELEMENTARY SCHOOLS.

CHAPTER I.

DEFINITIONS AND GENERAL CONDITIONS.

TRAINING COLLEGES.

1.—(a) For the purposes of these Regulations a Training College is an institution for giving instruction in the principles and practice of teaching to persons who are preparing to become Certificated Teachers in Public Elementary Schools, and for supplementing their general education so far as may be necessary. In the case of students whose general education is sufficiently advanced the Training College course may be confined to purely professional instruction.

(b) Training Colleges in which all or some of the students are boarded and lodged are termed Residential Training Colleges. Other Training Colleges are termed Day Training Colleges. Institutions for boarding and lodging students who are attending a Training College are termed Hostels.

(c) Training Colleges which provide efficient training and fulfil the conditions set forth in these Regulations may be recognised by the Board of Education as eligible for Annual Grants under the conditions stated in Chapter X. Such Colleges are in these Regulations referred to as Recognised Training Colleges.

(d) Training Colleges which provide efficient training, but do not fulfil all the conditions required for recognition for the purpose of Grants, may be certified by the Board as supplying efficient training for Private Students under the conditions stated in Chapter XI. Such Colleges are referred to as Certified Training Colleges.

(e) Persons who comply with the conditions set forth in these Regulations may be admitted to Recognised Training Colleges as Recognised Students, and Grants are payable on their account in accordance with the provisions of Chapter X. Other persons may be admitted either to Recognised Training

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Colleges or to Certified Training Colleges as Private Students under the conditions stated in Article 9 (b). No Grants are payable on account of Private Students.

(f) Recognised Students who are boarded and lodged in a Residential Training College are termed Resident Students. Recognised Students who are boarded and lodged in a Hostel are termed Hostel Students. Other Recognised Students in attendance at a Training College are termed Day Students. A Residential Training College may receive Day Students.

2. A Training College, whether Residential or Day, may be either (a) a separate institution carried on solely for the training of teachers, or (b) a department of a University, or (c) a department of an institution devoted to Higher Education both in Arts and Science. A Training College must be recognised under one of the foregoing heads, and no change in its status may be made without the previous approval of the Board.

3. In the case of the first and third of the above-named types of Colleges, it must be shown to the satisfaction of the Board that the following conditions (apart from the provision for the professional training of the students) are fulfilled:—

(a) The teaching staff of the institution must be such as to provide adequately for each of the following branches of study: (i) Education; (ii) English Language and Literature; (iii) History; (iv) Geography; (v) Mathematics; (vi) Elementary Science. In Training Colleges in Wales provision must also be made for the teaching of Welsh.

b) Not only the conditions of the Training College, but also those of any institution in connection with which it may be conducted must be suitable. A yearly statement as to the general income and expenditure of the institution as a whole must be submitted to the Board, and such statement must show the salary paid to, and all the duties performed by, each person who gives instruction to any students in the College.

4.—(a) The management, courses of instruction, and general arrangements of a Training College must be approved by the Board. These arrangements must include provision for recording the antecedents of students, particulars of their careers after admission, and the breaks, if any, in the continuity of their residence or attendance.

(b) The scale of fees (if any) must be approved by the Board.

(c) In cases where Private Students are residing in or attending a Training College in accordance with Article 9 (b), the scale of fees must be so framed that the fee charged to a Recognised Student, when added to the Parliamentary Grant

payable on his behalf, will not in any case produce a sum greater than the fee charged to any Private Student who occupies similar accommodation.

(d) The premises and equipment of a Training College must be approved by the Board. The premises must include suitable class-rooms, lecture-rooms, laboratories, dining-rooms, and common-rooms or recreation-rooms. There must be a suitable reference library for the use of the students. In Residential Colleges suitable provision must be made for the accommodation of the students who reside there. (See *Appendix H.*) Existing premises proposed to be used for Training College purposes will not be approved without a satisfactory certificate given after examination and testing by a professional sanitary engineer. Alterations in premises should not be carried out without previous reference to the Board. Facilities for Physical Training must be provided in connection with every Training College in a manner approved by the Board, and provision should also be made for playing-fields suitable for the practice of organised games.

(e) There must be adequate provision in approved Practising Schools for the instruction of the students in teaching. (See also *Appendix F.*) No school will be approved as a Practising School unless its staff, premises, and equipment are satisfactory for the purpose. The approval of any Practising School is open to review from time to time.

(f) No Training College not already recognised will be considered as completely equipped without a Demonstration School, and the Board will require, where such a School is not established, to be satisfied that circumstances make it impossible. A Demonstration School must fulfil the following conditions:—

- (i) It must be either a Public Elementary School or other School approved for this purpose by the Board, and must be organised and taught in accordance with the provisions of Chapter I. of the Code of Regulations for Public Elementary Schools.
- (ii) It must be closely associated with the Training College for the purpose of illustrating the most approved and successful methods of school organisation, discipline, and instruction.
- (iii) The conditions of association must be such as to allow the Governing Body of the Training College to exercise effective influence over the details of organisation (including staffing), discipline, and instruction, and to secure that these shall be the best available.

5.—(a) Every Training College must have a responsible Principal. The Principal of a Women's College should, as a rule, be a woman. In Colleges attended both by men and by women students there must be a responsible Woman Vice-Principal.

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(b) The number and qualifications of the teaching staff, their salaries, and their hours of duty, must be approved by the Board. The staff of a College at which some of the students are women must include a reasonable proportion of women, and in the case of a College attended mainly by women students at least half of the permanent staff other than the Principal must be women.

(c) At least two-thirds of the teaching staff of an institution applying for recognition as a Training College for the first time must consist of persons holding University qualifications approved by the Board. Until the proper proportion be attained, alternate vacancies, at least, in the non-graduate portion of the staff of existing colleges must be filled by the appointment of persons holding such qualifications.

(d) All proposals for appointments to the teaching staff of a College, including the post of Principal, must be submitted for approval to the Board, together with the fullest possible details as to qualifications, before they are confirmed by the Governing Body. A man proposed as Principal of a College who does not hold a Degree in Honours of a British University will not, save in exceptional circumstances, be recognised for this purpose by the Board.

(e) The continued approval of any member of the teaching staff is subject to the Board being satisfied as to his or her efficiency.

HOSTELS.

6. An institution for boarding and lodging Students who are attending a Recognised Training College may be recognised by the Board as a Hostel on fulfilment of the conditions laid down in these Regulations.

(a) The Board must be satisfied with the management, scale of fees, and general arrangements of a Hostel, including the arrangements made for recording the breaks, if any, in the continuity of residence of the students. No charge may be made to the students by a Hostel without the approval of the Board.

(b) Where a Hostel is occupied partly by students recognised by the Board, and partly by other students or boarders, the scale of fees must be so framed that the fee for Hostel purposes charged to a Recognised Student, when added to the Parliamentary Grant payable on his behalf, will not in any case produce a sum greater than the fee for Hostel purposes charged to any other student or boarder not so recognised who occupies similar accommodation.

(c) The Board must be satisfied with the premises of a Hostel. The premises must include suitable rooms

for study, common-rooms or recreation-rooms, dining-rooms, and bedrooms; and the Hostel must be conveniently situated in relation to the Training College or Colleges attended by its students. Existing premises proposed to be used for Hostel purposes will not be recognised without a satisfactory certificate given after examination and testing by a professional sanitary engineer.

- (d) No Hostel will be recognised unless the Board are satisfied that it is needed, and a Hostel will not as a rule be recognised unless suitable provision be made in it for not less than ten students, whether students at a Training College or not.
- (e) A Hostel must have a responsible Principal approved by the Board; and the Board must also be satisfied with the staff of the Hostel.
- (f) No institution which was not recognised as a Hostel before the 1st of August, 1907, will be so recognised unless it satisfies the conditions set forth in Articles 7 (g) and 7 (h), and unless also it is connected in such a manner as the Board may consider satisfactory with a Training College which satisfies those conditions.
- (g) An institution for boarding and lodging Students who are attending a recognised Training College may continue to be recognised as a Hostel if it was so recognised before the 1st of August, 1907, even though it does not satisfy the conditions required by Articles 7 (g) and 7 (h).
- (h) An institution which does not satisfy the above conditions may receive recognition from the Board as providing accommodation for such students as wish to reside there, on the same conditions as apply in the case of lodgings.
- (j) Men Students who do not reside in a Residential Training College must reside either (i) in a recognised Hostel, or (ii) with their parents or guardians, or (iii) in lodgings licensed and inspected by the Authorities of the College or of any institution of which the College forms a part.
- (k) Women Students who do not reside in a Residential Training College must reside either (i) in a recognised Hostel, or (ii) with their parents or guardians. For the present, with the special approval of the Training College and the Board, Women Students may reside in lodgings licensed and inspected by the Authorities of the College or of any institution of which the College forms a part, on condition that the Board are satisfied that steps are being taken to provide

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sufficient accommodation in Hostels for Women Students attending but not residing in the College, with due regard to the extent to which such students may reasonably be expected, in view of local circumstances, to live at home.

- (l) It shall be open to the Governing Body of any College either for men or for women, to make it a rule that any students attending the College must reside either in the College or in a recognised Hostel, provided that the student does not claim exemption from this rule on religious grounds or other grounds held to be reasonable by the Board.

MANAGEMENT AND DISCIPLINE OF TRAINING COLLEGES AND HOSTELS.

7.—(a) Every Training College and every Hostel must have a responsible Governing Body, who must furnish such Returns as the Board may from time to time require. The Governing Body must appoint a Correspondent to whom all official letters may be addressed, and also a Treasurer, whose name and address must be communicated to the Board. The Governing Body of a Hostel need not be identical with the Governing Body of the College which the students attend. In the case of a Training College which is a department of a University, the Senate or Council of the University, whether acting directly or through a committee, may be recognised as the Governing Body of the Training College. In Colleges at which some or all of the students are women the Board must be satisfied that a sufficient number of women are appointed either as members of the Governing Body or as members of a Committee entrusted with the management of the College.

(b) The Governing Body of the Training College will be held responsible for the framing and submission of the courses of study in cases where the syllabuses contained in these Regulations are not followed.

(c) The Governing Body of the Training College will be held responsible for the discipline and moral supervision of the students who do not reside in Hostels, for due care as regards their board and lodging, and for the regular attendance at professional or other lectures of all students.

(d) The Governing Body of the Training College must appoint the Principal of the College, or some other responsible person or persons, to visit and supervise all lodgings occupied by Day Students. The rules and regulations as to lodgings occupied by students in training should be submitted to the Board for approval. They should include, amongst other things, provision for the keeping of proper records in respect of the students by the keepers of lodging-houses, and for the inspection of lodging-houses by visits without notice.

(e) The Governing Body of the Training College and that of the Hostel will, each in its own sphere, be held responsible for the discipline and general supervision of the Hostel Students.

(f) If in the case of any Recognised Student there is any serious interruption of the course of training, or of residence in a Hostel, whether by reason of illness or otherwise, the Governing Body of the Training College or Hostel must at once acquaint the Board with the name of the student and the cause and probable duration of the absence.

(g) No institution which was not recognised as a Training College or Hostel before the 1st of August, 1907, will be so recognised unless it is either provided by a Local Education Authority or is conducted by a body of Governors acting under and in accordance with a scheme, or other written instrument or body of regulations, approved by the Board. Such a scheme or instrument must comply with the following conditions :—

(i) It must not require any members of the teaching staff to belong or not to belong to any particular religious denomination ;

(ii) It must not require a majority of the Governing Body (whether in virtue of their tenure of any other office or otherwise) to belong or not to belong to any particular religious denomination ;

(iii) It must not provide for the appointment of a majority of the Governing Body by any person or persons who, or by any body the majority of whom, are required (whether in virtue of their tenure of any other office or otherwise) to belong or not to belong to any particular religious denomination.

(h) No institution which was not recognised as a Training College or Hostel before the 1st of August, 1907, will be so recognised unless the following conditions are observed :—

(i) No catechism or formulary distinctive of any particular religious denomination may be taught in the College or Hostel, except as provided by this Article.

(ii) If the instrument under which the College or Hostel is governed requires or does not prohibit the giving in the College or Hostel of religious instruction distinctive of any particular denomination, the Governing Body may provide such instruction for any student upon the written request of the student. A record must be kept of all such requests.

(iii) In Colleges or Hostels where such instruction is given, regulations must be made by the Governing Body such as will secure observance of the provisions of

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this Article to the satisfaction of the Board, and a copy of such regulations must be given to each student.

- (iv) Such instruction, if given, must be provided from funds other than Grants made by the Board or any Local Authority.

ADMISSION OF STUDENTS.

8. In general the selection of particular persons for admission to a Training College or Hostel rests with the Governing Body of each College or Hostel, acting through such agents as they may appoint. Such persons must possess the qualifications required by the Board. In the case of candidates admitted, or applying to be admitted, as Recognised Students the following conditions must in all cases be observed :—

- (a) The Principal or Official Correspondent of every Training College or Hostel in receipt of Grant must keep for the use of the Board a Register of candidates for admission in the order in which their applications are received and opened. This Register must show particularly all information as to the qualifications of the candidates which has been received (1) prior to, (2) together with, (3) subsequent to, the applications.
- (b) If the candidate has been refused admission, the Register must state also, in as much detail as possible, the reasons for refusal. The actual reasons must be recorded for the information of the Board, confidentially if needs be; but they need not be communicated to the candidate or his friends in the form in which they are recorded.
- (c) Applications received before the 1st of October of the year before that in which admission is desired must be returned with the intimation that they cannot be received or recorded until that date.
- (d) (i) In the selection of candidates for half the number of places which will be vacant, the Authorities of a College may not reject, or invite the withdrawal of, the application of any candidate, not belonging to the denomination of the College, on the ground of religious faith or by reason of his refusal to undertake to attend or abstain from attending any place of religious worship, or any religious observance, or instruction in religious subjects in the College or elsewhere, nor may they require any candidate, not belonging to the denomination of the College, to enter for any examination in religious knowledge.

- (ii) No student may be refused admission to a College except on reasonable grounds, and, in particular, no student may be refused admission on the ground that he has not been vaccinated, or on the ground of social antecedents.
- (e) Applications may be made by or on behalf of any candidate who has been refused admission to a College with a view to obtaining the Board's decision as to whether Article 8 has been infringed.
- (f) If the grounds on which a candidate has been rejected are in the view of the Board unreasonable, the College concerned will be liable to a reduction in its total Grant for the year not exceeding £100 on the first occasion, and to removal from the list of recognised Colleges on the second occasion.
- (g) If the Authorities of a College require any candidate, as a condition of admission, to attend for the purpose of an interview or an Examination either at the College or elsewhere, they must defray any expenses necessarily incurred by the candidate in attending the interview or Examination.
- (h) No student admitted to a College who, when offered a place in the College, claims exemption on the conscientious ground of not belonging to the denomination of the College, shall be required, as a condition of entering or continuing in the College, to comply with any rule of the College as to attendance at religious worship or observances or instruction in religious subjects.
- (j) No Recognised Student may be dismissed from a College or Hostel except with the approval of the Board, but the Governing Body of the College or Hostel may at any time in case of necessity suspend any Recognised Student from attendance at the College or Hostel until the Board's decision is known.

9.—(a) The maximum number of students who may be in training at any one time is fixed for each Training College by the Board, after consideration of the premises, staff, and equipment of the College, and the provision made for the instruction of the students in approved Practising Schools. If the Authorities of a Training College desire that the number should be increased they should at once apply to the Board. In the absence of special circumstances, applications affecting any academical year will not be entertained unless they have been made before June 1st of the preceding academical year.

(b) With the special approval of the Board, a Recognised Training College may admit a limited number of Private Students, on behalf of whom no Grants will be paid by the

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Board. Certified Training Colleges may also admit Private Students under the conditions stated in Chapter XI. If a Private Student satisfies the conditions of admission set out in Articles 13, 38, and 44 of these Regulations, and follows the courses of study and passes the tests of proficiency prescribed in the case of Recognised Students, he will be regarded by the Board as qualified by attainments for recognition as a Certificated Teacher. Private Students who do not satisfy the ordinary conditions of admission or follow the ordinary courses of study prescribed in these Regulations may, in certain cases, be admitted with a view to following a course of study leading up to a special certificate, if arrangements for this purpose have been approved by the Board.

(c) When it is proposed that Private Students should be admitted to any of the number of places which a Recognised Training College is regarded as providing for the purpose of Article 9 (a), the Board must be informed, and the number of Recognised Students admitted to the College must be proportionately reduced.

(d) A married woman may not be admitted as a student in a Training College without the express sanction of the Board.

10. Before candidates are admitted as Recognised Students—

(a) The Board must be satisfied by a medical certificate in a prescribed form* that the state of their health is satisfactory, and that they are free from serious bodily defect or deformity; and

(b) They must give an Undertaking to the Board for the purpose of securing that in return for the Grant payable under these Regulations, they will complete their training at the College, and thereafter actually follow the profession of teacher in an approved school for such period or periods, or repay to the Board such proportion of that Grant, as may respectively be specified in the Undertaking. The Undertaking will be in one of the forms set out in Appendix B. to these Regulations, or in such a variation of that form as is approved by the Board as appropriate to the case of the candidate concerned.

N.B.—Upon being satisfied that any students have failed to carry out the conditions, either of the Undertaking here mentioned, or of the Declaration mentioned in Article 10 (b) of the Training

* Copies of the prescribed form of medical certificate may be obtained from the Board on application. A circular to Training Colleges giving particulars as to the arrangements to be adopted for the medical examination of candidates for admission (Circular 715), is reprinted in Appendix G. to these Regulations.

College Regulations for 1907 or previous years, as the case may be, the Board may cancel their certificates, and may refuse to recognise them as teachers.

FINANCIAL ARRANGEMENTS.

11.—(a) A Training College or Hostel must not be conducted for private profit, and must not be farmed out to the Principal or to any other person.

(b) The accounts of a Training College or Hostel must be kept in the form prescribed by the Board, and must be annually presented to the Board after being duly audited by a qualified public Accountant and Auditor.

(c) Such part of the income of a Training College or Hostel as arises from Exchequer Grants (excluding any special Grant paid under Chapter XII. of these Regulations) must not be applied to meet any rent paid in respect of the premises, or the interest on any loan or mortgage, or any expenditure on premises other than that for ordinary repairs. Income from students' fees may not be applied to the payment of the charges named above, except under conditions approved by the Board.

GENERAL CONDITIONS.

12.—(a) A student may be admitted to a recognised Training College—

- (i) for a Two Years' Course (*Chapter II.*), which, in certain cases—
- (ii) may be extended for a Third Year (*Chapter III.*),
- or (iii) for a One Year's Course (*Chapters IV. and V.*):
- or (iv) students having special qualifications may be admitted to Training Departments of University Institutions or to Training Colleges closely connected with a University for a Three Years' Course (*Chapter VI.*), or a Four Years' Course (*Appendix D.*).

(b) For the purpose of these Regulations the academical year of a Training College may begin either on the 1st of August or on the 1st of April. Subject to the approval of the Board the Authorities of a Training College may decide upon which of these dates the academical year of that College shall begin, but the Board may, if they think fit, reconsider their approval from time to time in any case. A Training College will ordinarily admit students from only one of these dates, but students may be admitted from both of the dates named to a College in which the Board are satisfied that proper arrangements can be made for the organisation of the work.

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(c) The course of training taken by a student under these Regulations must be approved by the Board, and may with such approval be altered by the authorities of the Training College from time to time.

(d) The Board may, if they think it desirable, allow a student to remain at or return to a Training College in order to complete a course of training which has been seriously interrupted by illness or other exceptional cause. But the total grants paid in respect of the student will not exceed those which would have been paid if the original period had not been interrupted, and the student will not be regarded as having been trained for a period longer than that originally sanctioned.

(e) A student who has been admitted to a recognised Training College for a two or three years' course may, with the consent of the College Authorities and the approval of the Board, be transferred at the conclusion of one or two years of the course, as the case may be, to some other recognised Training College, provided that circumstances have arisen which render it undesirable for the student to remain at the original College, and that suitable arrangements can be made to ensure the continuity of the student's course of study.

(f) At the end of the course of training of each student the Board will consider the report of the Training College Authorities on the industry and behaviour of the student during his course of training, and, where such report is unsatisfactory, the Board may either decline to recognise the student as a teacher at the end of his course of training, or may postpone the endorsement of his certificate beyond the time required under Schedule I. A. 4 (ii.) of the Code. If at any time during his course the conduct or progress of a student is so unsatisfactory as to make it likely that the report presented to the Board will be unfavourable, the student should be warned and the Board informed of the warning as soon as possible.

CHAPTER II.

TWO YEAR STUDENTS.

ADMISSION AND GENERAL CONDITIONS.

13.—(a) Students are admitted to Training Colleges for a Two Years' Course in order that they may (i) receive instruction in the subjects needed for their professional training, and (ii) continue their general education by making a special study of selected subjects. Students admitted for such a course are termed Two Year Students.

(b) Candidates for admission as Two Year Students must have passed a qualifying examination in accordance with the requirements of Appendix A. (I.).

(c) Candidates for admission as Two Year Students must, as a rule, be over 18 years of age on the first day of the academical year for which they are admitted. Persons who have been for three years in regular attendance at an efficient Secondary School may, with the special approval of the Board, be admitted between the ages of 17 and 18. But no persons may be admitted to a Training College unless they are over 17 years of age on the first day of the academical year for which they are admitted.

(d) Persons who have been recognised as Bursars or as Pupil-Teachers under the Board's Regulations for the Preliminary Education of Elementary School Teachers will not be admitted to Training Colleges until the termination of their period of recognition.

14.—(a) Two Year Students are required to follow courses of study and to undergo tests of proficiency in accordance with Articles 15 to 20, except in so far as alternative courses of study and alternative final examinations are approved for them under Articles 21 to 27.

(b) Approved courses of study and final examinations should not be departed from without the sanction of the Board. If in the opinion of the Authorities of a Training College it becomes desirable to alter an approved course of study or final examination, application for the Board's approval of the proposed changes should be made as early as possible.

(c) Except with the approval of the Board, students must not be prepared for or allowed to enter for any examinations in secular subjects other than their final examination under these Regulations or a College examination conducted wholly or mainly by the teaching staff.

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ORDINARY COURSES OF STUDY AND TESTS OF PROFICIENCY.

15.—(a) Every Training College admitting Two Year Students will be required to provide courses of instruction in the subjects named in this paragraph. The subjects included in Group B are to be studied directly with a view to the students' professional training. The subjects included in Group A are to be studied with a view both to the students' professional training and to the continuance of their general education.

Group A. General Subjects.

English.
History.
Geography.
Mathematics.
Elementary Science.
Welsh (in Welsh Colleges).

Group B. Professional Subjects.

The Principles and Practice of Teaching.
Hygiene and Physical Training.
Theory of Music and Singing.
Reading and Recitation.
Drawing.
Needlework (for women).

(b) The courses of instruction in these subjects may be either Ordinary Courses or Advanced Courses. Ordinary Courses will be recognised in all the subjects named. Advanced Courses will be recognised in English, History, Geography, Mathematics, Welsh, the Principles of Teaching, Music, and Drawing.

(c) Training Colleges may also with the approval of the Board provide Advanced Courses of instruction in the following additional subjects :—

Group C. Additional Subjects.

French.	Chemistry.
German.	Botany.
Latin.	Rural Science.
Physics.	Housecraft.

The Board's approval of an Advanced Course of instruction in any of these subjects will be conditional on their being satisfied from time to time that the staff and equipment of the College are adequate for giving instruction in the subject, and that the students who are recommended by the College authorities as qualified to take the course are properly selected.

(d) Syllabuses for the Ordinary and Advanced Courses in the various subjects are set out in Appendix C. of these Regulations.

16.—(a) Subject to the exceptions stated in paragraphs (b) (c) and (d) below, every Two Year Student must follow courses of study in all the Professional Subjects included in Group B in Article 15 (a), and in at least three of the General Subjects included in Group A, of which one must be English. Any student may on the recommendation of the Authorities of his Training College take an Advanced Course in any of these subjects in which an Advanced Course is recognised, in place of the corresponding Ordinary Course.

(b) Students who are incapable of profiting by practical instruction in Music may omit the Theory of Music and Singing. Students whom the College Authorities can show to the satisfaction of the Board to be proficient in Drawing or Needlework respectively on admission to the College need not receive instruction in those subjects, but their proficiency in them will be tested during their period of training in the manner provided by Article 19.

(c) Students taking certain Advanced Courses in History may, with the approval of the Board, substitute for English some other of the General Subjects included in Group A., subject to the condition that every student will be required to write an English Essay. Students who have gone through a course of instruction in Practical Science before admission to the Training College may take an Advanced Course in Physics, Chemistry, Botany, or Rural Science, in place of the Ordinary Course in Elementary Science, as one of the minimum number of courses required under Article 16 (a).

(d) In particular cases, with the special approval of the Board, the number of courses required to be taken in the subjects of Group A. may be reduced from three to two.

(e) Any student may, on the recommendation of the College Authorities, take not more than two further courses in addition to the minimum number of courses required under Article 16 (a). These courses may be either Ordinary or Advanced Courses in any subjects of Group A not already taken by the student, or may be Advanced Courses in any subject of Group C in which a course has been approved for the College.

(f) A student may not include French, German or Latin in his course of study unless he has on or before entering the Training College passed some examination in that language satisfactory to the Board.

17.—(a) The instruction in the Principles and Practice of Teaching must include instruction in the methods of teaching all the subjects ordinarily taught in a Public Elementary

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School, and must in particular provide in the case of each student for instruction in the methods of teaching each of the subjects included in Group A, so far as this is necessary for work in Elementary Schools whether they are selected for the student's own special study or not. Provision must also be made for instruction in Handwork on the lines set out in Appendix C.

(b) Students who have not had practical experience as teachers in Elementary Schools in some capacity recognised by the Board before entering the Training College will be required to spend at least twelve weeks during their course of training in Class Teaching. In the case of students who have had practical experience as teachers in Elementary Schools in some capacity recognised by the Board before entering the Training College, the period to be given to practice in Class Teaching may vary from six to twelve weeks, as may be determined by the College Authorities in view of the circumstances of the particular case. The time given to practice in Class Teaching may not in the case of any student be reduced to less than six weeks except with the special sanction of the Board. The greater part of the period of Class Teaching must be spent in a Public Elementary School, and the remainder must be spent either in a Public Elementary School or in some other school approved by the Board as providing practice suited to the needs of intending teachers in Public Elementary Schools. At least half of the period must fall during the second year of training.

18.—(a) The Board will hold a Final Examination for Students in Training Colleges, herein-after called the Board's Final Examination, at which papers will be set on all the Advanced Courses, and on the Ordinary Courses in the following subjects:—

English.
History.
Geography.
Mathematics.

Welsh.
The Principles of Teaching.
Hygiene.
The Theory of Music.

(b) Two Year Students for whom alternative final examinations have not been approved will attend this examination. They will be examined in the Professional Subjects (*i.e.*, the Principles of Teaching, Hygiene, and the Theory of Music) and in the English Essay at the end of their second year. The examination of any student in the other subjects specially studied by him may take place either at the end of the first year or at the end of the second year, as desired by the Authorities of the College.

(c) The examination for students whose academic year begins on 1st August will be held at the end of June or the beginning of July in each year. Special arrangements will be made for the examination of students whose academic year begins on 1st April.

19.—(a) No written examination will be held on the subjects named in this paragraph, but the proficiency of students in them will be tested in the manner described below :—

The Practice of Teaching.	Reading and Recitation.
Physical Training.	Drawing.
Singing.	Needlework.

(b) The Training College staff will indicate their opinion as to the proficiency of individual students in each of the subjects named by keeping a record of marks during the period of training. They will also keep a register showing the attendance of students at lessons in these subjects. These documents will be subject to the scrutiny of the Board or of their Inspector. Before the end of the second year of training the Training College will submit to the Board lists of the students, arranged in four groups according to their proficiency in each of these subjects. The Inspector will award marks for each subject after considering the lists and imposing such tests as he may think necessary.

(c) Students who have been exempted from Drawing or Needlework in accordance with Article 16 (b) should be included in these lists with the other students, and their proficiency in these subjects may be tested by the Inspector. Students who have been exempted from Singing on the ground that they are incapable of profiting by practical instruction in Music should not be included in the lists.

20. Students taking a course of study in Elementary Science will be arranged in groups by the Training College Authorities according to their proficiency in that subject and marks for the subject will be awarded to them in the manner described in Article 19 (b).

ALTERNATIVE COURSES OF STUDY AND FINAL EXAMINATIONS.

21. Alternative final examinations and alternative courses of study leading up to them may, with the approval of the Board and subject to the conditions stated in the following articles, be taken by Two Year Students in place of the Board's Final Examination and the courses of study leading up to that examination. The examinations approved for this purpose may be of either of the following types :—

(a) An Alternative College Examination may be approved for the whole body of Two Year Students in a College, other than those students, if any, who are examined under paragraph (b).

(b) Suitable University Examinations forming recognised stages in courses for Degrees may be approved for individual Two Year Students.

22. The approval of the Board to an alternative examination is subject to their being satisfied that the proposal is justified by

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the equipment of the College, by the adequacy of the teaching staff, and by the attainment of the students for whom the examination is proposed ; and is subject to periodical revision as the Board may think fit.

ALTERNATIVE COLLEGE EXAMINATIONS.

23. The Board are prepared to approve an Alternative College Examination for the Two Year Students of a College as a body, if it is conducted either (a) by a University or (b) by a Joint Examining Body in accordance with the following paragraphs :—

- (a) An examination conducted by a University for the purpose of this Article must be designed with special reference to the courses of study approved for the Training College. An examination constituting a recognised stage in a course for a Degree will not be approved for this purpose. In approving an examination under this head the Board reserve to themselves the right of scrutinising at convenient intervals the questions set and the papers worked by candidates.
- (b) A Joint Examining Body constituted for the purpose of this Article must include one or more of the Board's officers who will act as Assessors, members of the staff of the Training College or of the institution of which the Training College is a department, and other persons. Not more than half the number of the Joint Examining Body may be members of the staff of the Training College or of the institution of which the Training College is a department. The proposed papers of questions must be submitted for the approval of the Board through the Board's Assessor, and the Board's Assessor will attend any meeting of examiners at which the results of the examination are considered. The Assessor however will not himself set questions or mark answers. The arrangements for marking the papers must conform to the rules of Appendix E. Before the list of passes is published the Assessor must have access to all records of the students' work and must have the right to call for the papers worked by them in this and other examinations and to refer them to the Board. The Board reserve the right to confirm or veto any proposals put forward by the Joint Examining Body.

24.—(a) An Alternative College Examination must make provision (i) for a written examination in English, History, Geography and Mathematics, and for a written examination or practical test in Elementary Science. Every student must be examined or tested in at least three of these subjects, of which one must, as a rule, be English. It may also provide (ii) for an

examination in any or all of the Additional Subjects named in Article 15 (c), and (iii) for an examination in the Principles of Teaching, Hygiene, and the Theory of Music.

(b) Students taking an Alternative College Examination will be required to undergo tests of proficiency in the Professional Subjects mentioned in Article 19 in the manner there described. They must also take in their second year the Board's Final Examination in the Principles of Teaching, Hygiene, and the Theory of Music, unless provision for these three subjects is included in the Alternative Examination. They will not be eligible to take the Board's Examination in any other subjects.

(c) An Alternative College Examination should as a rule be divided into two parts, one to be taken at the end of each year of training. Students must be examined in the Principles of Teaching in the second year.

25. When proposals for an Alternative College Examination have been approved by the Board, the syllabuses of the courses of study leading up to the examination must be submitted to the Board, in such detail as may be required, as soon as possible after the students who will take the examination have entered on their course of training. Changes in the arrangements for the examination or in the courses of study must be submitted for the Board's approval at as early a date as possible.

DEGREE COURSES.

26.—(a) Subject to the fulfilment of the following conditions, individual Two Year Students may be allowed to enter for suitable University Examinations forming recognised stages in courses for Degrees. Students entering for such examinations are referred to as students taking Degree Courses.

(b) A University examination approved under this article will be regarded as an Alternative Final Examination to the Board's Final Examination so far as the subjects of English, History, Geography, Mathematics and Elementary Science are concerned. Students following Degree Courses will not be admitted to the Board's Examination in any of these subjects or in any of the subjects named in Article 15 (c).

(c) Students following Degree Courses will, subject to the exception mentioned below as to Physical Training, be required to undergo tests of proficiency in the subjects named in Article 19, in the manner provided in that article, and must in their second year attend the Board's Final Examination in the Principles of Teaching and the Theory of Music unless an Alternative Examination has been specially approved for them in these subjects.

(d) Students taking Degree Courses will ordinarily be expected to take courses in Hygiene or Physical Training and to satisfy the usual tests of proficiency in these subjects, but they may be exempted from them on the recommendation of the Training College Authorities. The Board may in future years find it necessary to require that students who have been exempted

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from instruction in these subjects during their period of training shall produce evidence of proficiency in them before being recognised as Certificated Teachers.

27. A student for whom a Course of Study is proposed under Article 26 must satisfy the following conditions :—

- (a) He must, before his admission to the College, have passed one of the examinations specified in Appendix A (II.).
- (b) He must be qualified under the University Regulations to enter upon a full Degree Course of Study without further examination.
- (c) He must be certified by the College not later than the close of his first term to have declared his intention of proceeding to a Degree at the earliest possible date, and to be reasonably likely to pass the examinations necessary for a Degree.
- (d) Different students in the same College may not be prepared for the examinations of different Universities.
- (e) The College must be able to provide the necessary instruction without detriment to its general work.
- (f) The medical officer of the College must certify that in each case the student is physically fit for the extra strain that will be placed upon him.
- (g) Latin may not be included in the course of any student, nor may any student enter for an examination in this language, unless he has passed, on or before admission to the College, some examination in that language satisfactory to the Board.
- (h) The Board may at any time require to be satisfied that the student is sufficiently advanced to profit by instruction of a University character, and is making due progress in the course.
- (j) If the student fails to make due progress in his studies or if it is found that his health is not sufficient to allow the course to be continued without undue strain, he will be required to abandon the Degree Course, and his fitness for recognition as a Certificated Teacher will be determined by the Board in any manner they may think desirable.

CERTIFICATION OF TWO YEAR STUDENTS.

28.—(a) The Board will determine which Two Year Students have satisfactorily completed their period of training and are qualified for recognition as Certificated Teachers after considering the results of their Final Examination of the students or of any Alternative Examination accepted in place of that examination, and the grouped lists of students submitted by the Training Colleges under Articles 19 and 20 together with the awards of the Inspectors upon the lists. In considering these results they will take into account the proficiency shown by each student

(i) in the subjects of his course as a whole, (ii) in the General Subjects separately, and (iii) in the Professional Subjects separately.

(b) The Board will also consider the results of their Final Examination and of any approved College Examination with a view to assigning marks of credit or distinction for particular subjects, as provided by Chapter VIII.

(c) A Two Year Student who is not considered by the Board to be qualified for recognition as a Certificated Teacher under Article 28 (a) may be recognised as a temporarily Certificated Teacher for a period of two years and six months after leaving the Training College.

(d) A student recognised under the foregoing paragraph must, in order to qualify for permanent recognition as a Certificated Teacher under these Regulations, satisfy the Board during the period named in one or other of the following ways:—

(i) If the student failed to reach the required standard in the subjects of his course as a whole, he must pass the Board's Final Examination supplemented by such further tests as the Board may require.

(ii) If the student satisfied the Board in the subjects of his course as a whole, but failed to reach the required standard in the Professional Subjects, he may be allowed to qualify for the Certificate by passing such further examination in the Professional Subjects as the Board may require in his case.

(iii) If the student satisfied the Board in the subjects of his course as a whole, but failed to reach the required standard in the General Subjects, he may be allowed to qualify for the Certificate by passing in the required number of General Subjects either at the Board's Final Examination or at the Alternative College Examination for which he previously entered.

(iv) If the student failed in a University Examination forming a recognised stage in a Degree Course, he may be allowed to qualify for the Certificate either by passing the University examination in question or by passing in the required number of General Subjects at the Board's Final Examination.

(v) If the approved examination in which the student failed was a Final University Examination for a Degree, the Board may, if they think fit, regard the student as qualified for his Certificate without further examination, provided that he has passed satisfactorily in the Professional Subjects and is specially recommended by the College Authorities.

(vi) If the student failed to reach a minimum standard of proficiency either in Practical Teaching or in Physical Training, he must pass a further test of proficiency in that subject to the satisfaction of the Inspector, in addition to passing in any examination that may be required of him under the above paragraphs.

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CHAPTER III.

THIRD YEAR STUDENTS.

29. A Two Year Student who has satisfactorily completed his period of training and is regarded by the Board as qualified for recognition as a Certificated Teacher may, with the special approval of the Board, be recognised for a third year of training. Students so recognised are termed Third Year Students, and their recognition is subject to the following conditions:—

- (a) The student must be recommended by the Authorities of the Training College at which the original period of training was taken, and also, unless the third year is to be continuous with that period, by the Local Education Authority maintaining the School in which he is employed at the time of the application and by an Inspector of the Board.
- (b) The Board must be satisfied (i) that the student is qualified by attainments and character for the course proposed; (ii) that if he has been employed in a Public Elementary School he has done good service; (iii) that the course proposed will not involve undue physical strain; (iv) that special educational facilities will be afforded him in order that he may be fitted for the better discharge of the duties for which he is being trained. (See Article 1 (a).)
- (c) Any application for a Third Year of Training must be made not later than the 31st of July in the year in which the original period of training expires, unless it can be shown that the course of training proposed for the third year is of such a kind as to make it advisable that the date of application should be postponed. The application may, however, be made provisionally and be contingent upon the fulfilment of certain conditions not at the time fulfilled.
- (d) A statement as to the course of study proposed must be submitted for the approval of the Board before the beginning of the additional year of training.

30. A third year of training may be taken at an approved institution either (a) in England or Wales or (b) abroad.

- (a) If the third year is taken in England or Wales, the course of study may be either (i) the final stage of a University Course in preparation for a Degree, or (ii) a course of professional training specially approved by the Board as a preparation for the work of teaching in Public Elementary Schools.

(i) If the course is the final stage of a University Course in preparation for a Degree, the third year must be continuous with the original period of training and must be taken at the Training College at which the original period of training was taken, and the student must be certified by the College Authorities to be reasonably likely to pass his Final Examination for a Degree not later than the end of the calendar year in which the third year of training concludes. In addition to following the Degree Course the student must spend at least a fortnight in teaching a class in a Public Elementary School, and must also take an Advanced Course in the Principles of Teaching as provided for Third Year Students in Appendix C, unless he takes Education as one of the subjects of his Degree Course.

(ii) If the course is a course of professional training specially approved by the Board, the third year may be taken either at the Training College at which the student was originally trained, or at some other institution which has been inspected and approved for the special purpose by the Board; and it may either be continuous with the original period of training or may be taken after an interval. As a rule it will be required that this interval shall have been not less than two years and not more than four years, and that during the interval the student shall have been continuously employed as a Certificated Teacher in Public Elementary Schools; but this condition may be relaxed with the approval of the Board in special cases. The course must provide for systematic visits to Public Elementary Schools for the purpose of observing special points of organisation or method, and for extended teaching practice in such Schools; and if the third year of training is taken at the Training College at which the student was originally trained, the student must make a further study of Physical Training and must take an Advanced Course in the Principles of Teaching as provided for Third Year Students in Appendix C.

(b) If the third year of training is taken abroad, it may be taken either (i) under the conditions and with the objects set forth in Appendix J (I.), or (ii) under the conditions and with the objects set forth in Appendix J (II.).

(i) If the third year is taken in accordance with Appendix J (I.) it must be continuous with the original period of training.

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(ii) If the third year is taken in accordance with Appendix J (II.) it may only be taken after an interval of not less than two years and not more than four years from the end of the original period of training, and the student must during that time have been continuously employed as a Certificated Teacher in Public Elementary Schools.

31. Third Year Students must at the end of their third year of training satisfy such test as may in each case be approved by the Board, and they may not take or prepare for any external examination in secular subjects without the Board's express sanction.

32. The Board will determine whether the student has satisfactorily completed his additional year of training, after considering the result of such test as may be approved under the preceding Article.

CHAPTER IV.

CERTIFICATED STUDENTS.

Certificated Students admitted in 1913 will fall under the conditions stated in the Regulations of 1912, and not under the conditions stated in this Chapter.

33.—(a) Certificated Teachers who have not been trained in a Training College and who have served as Certificated Teachers in a Public Elementary School for not less than two years may be admitted as students for a One Year's Course. Such students are termed Certificated Students.

(b) Certificated Teachers who have not been trained in a Training College and who have served as Certificated Teachers in a Public Elementary School for less than two years may be admitted for a Two Years' Course of the kind provided for in Chapter II.

34.—(a) Certificated Students are expected to apply themselves (i) to improving their general education, and (ii) to such professional studies as will best supplement their previous experience. It is desirable that provision should not be made in their course of training for a larger number of subjects than can be properly studied in the time available.

(b) The course of study of a Certificated Student should as a rule include the following subjects :—

(i) Two subjects selected from English, History, Geography, Mathematics, and Elementary Science.

(ii) The following subjects, with the omission of any subject from which the student may be exempted in accordance with paragraph (e) below.

The Principles and Practice of Teaching.

Hygiene and Physical Training.

Theory of Music and Singing.

Reading and Recitation.

Drawing.

Needlework (for women).

(c) Such of the above subjects as are included in the course of study of a Certificated Student must be studied in accordance with the requirements of Appendix C. The courses in the subjects studied may be either Ordinary or Advanced.

(d) Instruction in the Principles and Practice of Teaching must be provided for in the course of study in all cases, and must include instruction in the methods of teaching all the subjects ordinarily taught in a Public Elementary School. Provision must also be made for instruction in Handwork on the lines set out in Appendix C. A Certificated Student must spend three weeks of the course of training either in Class

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Teaching in a Public Elementary School or in the observation of teaching work conducted by teachers of special competence and experience, unless the Board have specially exempted him from this requirement or from part of it.

(e) Instruction in Hygiene and Physical Training must also be included in the course of study in all cases. Instruction in the Theory of Music and Singing, Reading and Recitation, Drawing, and Needlework may be omitted if the College Authorities are satisfied as to the proficiency of the student in those subjects. Instruction in the Theory of Music and Singing may also be omitted by students who are incapable of profiting by practical instruction in Music.

(f) A Certificated Student may, on the recommendation of the College Authorities, take courses in not more than two further subjects in addition to those specified in paragraph (b).

35. Certificated Students will study the various subjects which are included in their courses of study under the regulations which are applicable to Two Year Students, provided that no Certificated Student may be prepared for, or allowed to enter for, an examination which forms a recognised stage in the course for a University Degree.

36. Certificated Students are tested in any subjects which have been included in their courses of study under the conditions applicable to Two Year Students completing their course of training in the same year. For these conditions see Articles 18 to 20. Certificated Students are not required to satisfy tests in subjects not included in their courses of study.

37.—(a) In determining which Certificated Students have satisfactorily completed their year of training, the Board will consider (i) the results of their Final Examination of the students or of any Alternative Examination accepted in place of that examination, and (ii) the grouped lists of students submitted by the Training Colleges under Articles 19 and 20 together with the awards of the Inspectors upon those lists.

(b) The Board will also consider the results of the examination with a view to assigning marks of credit or distinction as provided by Chapter VIII. to those Certificated Students who are recognised as having satisfactorily completed a year of training.

CHAPTER V.

ONE YEAR STUDENTS.

One Year Students admitted in 1913 will fall under the conditions stated in the Regulations of 1912, and not under the conditions stated in this Chapter.

38.—(a) Persons who have passed the Final Examination for a University Degree or one of the other examinations specified in Appendix A. (III.) may be admitted to a Training College in order to take a course of professional training in preparation for the work of teaching in Public Elementary Schools. Such students are termed One Year Students.

(b) Candidates for admission as One Year Students must be over 19 years of age on the first day of the academical year for which they are admitted.

39.—(a) Subject to the exceptions set out in paragraph (b) below, the course of study of every One Year Student must include the following subjects:—

The Principles and Practice of Teaching.
Hygiene and Physical Training.
Theory of Music and Singing.
Reading and Recitation.
Drawing.
Needlework (for women).

(b) Students who are incapable of profiting by practical instruction in Music may omit the Theory of Music and Singing. Students whom the College Authorities can show to the satisfaction of the Board to be proficient in Drawing or Needlework respectively on admission to the College need not receive instruction in those subjects, but their proficiency in them will be tested during their period of training in the manner provided by Article 19.

(c) The instruction in the Principles and Practice of Teaching must include instruction in the methods of teaching all the subjects ordinarily taught in a Public Elementary School. Provision must also be made for instruction in Handwork on the lines set out in Appendix C. A One Year Student must spend at least twelve weeks during his year of training in teaching a class in a Public Elementary School.

40. One Year Students will study the various subjects which are included in their courses of study under the regulations which are applicable to Two Year Students, provided that (a) no One Year Student may be prepared for, or allowed to enter for, an examination which forms a recognised stage in a Degree Course and (b) no One Year Student may be examined in any subject other than those named in Article 39 (a).

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41. One Year Students are tested in any subjects which have been included in their courses of study under the conditions applicable to Two Year Students completing their course of training in the same year. For these conditions see Articles 18 to 20. One Year Students are not required to satisfy tests in subjects not included in their courses of study.

42. In determining which One Year Students are qualified by attainments for recognition as Certificated Teachers at the end of their course of training, the Board will proceed as in the case of Two Year Students, with such modifications as may be necessary. (See Article 28.)

CHAPTER VI. THREE YEAR STUDENTS.

GENERAL CONDITIONS.

43. (a) Certain Training Colleges closely connected with a University, and specially recognised by the Board as adapted to provide an approved course of study leading up to and reaching a degree of that University in addition to professional training, may receive students for a Three Years' Course of training. Such Students are termed Three Year Students, and their admission and continued recognition are subject to the conditions set out in this and the following Article.

(b) No degree will be accepted for the purposes of this Article unless a course of study of three years or more subsequent to Matriculation is required by the University Regulations or Statutes as a qualification for admission to that degree.

(c) Affiliation to a University, or preparation for the external examinations of a University, will not be regarded as constituting a close connection with a University for the purposes of this Article.

44.—(a) (i) Candidates for admission as Three Year Students must have passed a qualifying examination in accordance with the requirements of Appendix A. (II.).

(ii) Candidates for admission as Three Year Students must, as a rule, be over 18 years of age on the first day of the academical year for which they are admitted. Persons who have been for three years in regular attendance at an efficient Secondary School may, with the special approval of the Board, be admitted between the ages of 17 and 18. But no persons may be admitted to a Training College unless they are over 17 years of age on the first day of the academical year for which they are admitted.

(iii) Persons who have been recognised as Bursars or as Pupil-Teachers under the Board's Regulations for the Preliminary Education of Elementary School Teachers will not be admitted to Training Colleges until the termination of their period of recognition.

(b) Candidates must be qualified under the University Regulations to enter upon a full course of study for a Degree without further examination. Candidates for recognition at the Oxford and Cambridge University Training Departments, who have not passed or obtained exemption from Responsions or the Previous Examination, must be shown to be sufficiently advanced in their studies to be able to undertake with profit the full course for Three Year Students.

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(c) Candidates must be reasonably likely to obtain a University Degree not later than the end of the calendar year in which their training course concludes, and must enter with the *bonâ fide* intention of doing so. Exceptions to this rule may be made in the case of Candidates who will take an Honours Course which ordinarily occupies four years.

(d) As a condition of continued recognition a Three Year Student must in each year of the course make due progress towards obtaining his Degree. No student will be regarded as making due progress unless he passes any examination which may form an intermediate stage in the course for a University Degree not later than the time contemplated by the ordinary arrangement of the University course of study.

(e) At the beginning of each academical year the Medical Officer of the Training College must satisfy the Board by a certificate or certificates in a prescribed form that the health of each candidate for a Three Years' Course, and of each Three Year Student already recognised, is sufficient to allow that course to be entered upon or continued in without undue strain.

(f) If, in the case of any Three Year Student, (i) the required Medical Certificate cannot be forwarded, or (ii) the student fails to make due progress towards obtaining the Degree, or (iii) the student fails to pass a satisfactory test of proficiency in the subjects named in Article 47, the Board will, as a rule, regard the student as a Two Year Student, and will determine his fitness for recognition as a Certificated Teacher in whatever manner seems desirable.

(g) In certain cases, if special reason can be shown for exceptional treatment, the Board may allow a Three Year Student, who would in the ordinary course have been treated as a Two Year Student in view of failure under Article 44 (f), to continue for a third year of training, on condition that he abandons the Degree Course, and devotes himself to professional studies and such academical studies exclusively as the Board may approve.

(h) If a student had completed one year of a Three Years' course of study for a University Degree before he entered the Training College, and fails to obtain a Degree at the end of the second year of training, the Board, after considering all the circumstances, may continue to regard him as a Three Year Student and may sanction his proceeding with the Degree Course during the third year of training.

COURSES OF STUDY.

45.--(a) The course of study of every Three Year Student must include on its professional side the following subjects,

unless in any case the Board have approved the omission of one or more of these subjects under the conditions stated below.

The Principles and Practice of Teaching.

Theory of Music and Singing.

Reading and Recitation.

Drawing.

Needlework (for Women).

(b) Courses of study for these Subjects are given in Appendix C, but alternative Courses may be submitted for approval provided they are not less extensive in character.

(c) Students who are incapable of profiting by practical instruction in Music may omit the Theory of Music and Singing. Students whom the College Authorities can show to the satisfaction of the Board to be proficient in Drawing and Needlework respectively on admission to the College need not receive instruction in those subjects, but their proficiency in them will be tested during their period of training in the manner provided by Article 47.

(d) Three Year Students who devote a year to professional training will be required to take courses in Hygiene, Physical Training, and Handwork. Other Three Year Students will not be required to take courses in these subjects, and will not be tested in them by the Board. The Board may in future years find it necessary to require that students who have been exempted from instruction in these subjects during their period of training shall produce evidence of proficiency in them before being recognised as Certificated Teachers.

(e) The instruction in the Principles and Practice of Teaching must include instruction in the methods of teaching all the subjects ordinarily taught in a Public Elementary School.

(f) Students who have not had practical experience as teachers in Elementary Schools in some capacity recognised by the Board before entering the Training College will be required to spend at least twelve weeks during their course of training in Class Teaching. In the case of students who have had practical experience as teachers in Elementary Schools in some capacity recognised by the Board before entering the Training College, the period to be given to practice in Class Teaching may vary from eight to twelve weeks, as may be determined by the College Authorities in view of the circumstances of the particular case. The time given to practice in Class Teaching may not in any case be reduced to less than eight weeks except with the special sanction of the Board. The greater part of the period of Class Teaching must be spent in a Public Elementary School, and the remainder must be spent either in a Public Elementary School or in some other school approved by the Board as

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providing practice suited to the needs of intending teachers in Public Elementary Schools. At least half of the period must fall during the second year of training.

46.—(a) All Three Year Students must take approved courses of study leading up to a Final University Examination for a Degree to be taken not later than the end of the calendar year in which their training course concludes, or, in the case of students taking an Honours Course which ordinarily occupies four years, not later than the end of the fourth year after admission to the Training College.

(b) Practical work in Science must be included in the course of every Three Year Student who does not produce evidence of having received instruction in Practical Science satisfactory both as to amount and as to the conditions under which it was given.

(c) The Board must be satisfied that the course of study, covering all the three years, which is proposed for each student, will be such as to fit him for the better discharge of the duties for which he is being trained (Article 1 (a)). Proposals for such courses of study must therefore be submitted to the Board as early as is practicable; if possible, at the beginning of the student's first term, but in no case later than the end of his first academical year. When they are likely to be delayed so long as this an interim scheme should be submitted at once for the first year's work. The Board may require a detailed Syllabus of any course or subject proposed.

(e) A student who has passed a Final University Examination qualifying for a Degree by the end of his first or second year of training respectively, may be allowed to continue for a further year of training on condition that he devotes his time exclusively to professional training in preparation for the work of teaching in Public Elementary Schools. The course of training proposed for this purpose must provide to the satisfaction of the Board for systematic visits to Public Elementary Schools for the purpose of observing special points of organisation or method, for extended teaching practice in such Schools, and for a study of Hygiene and Physical Training and Handwork.

TESTS OF PROFICIENCY.

47.—(a) No written examination will be held on the subjects named in this paragraph, but the proficiency of students in them will be tested in the manner described below.

The Practice of Teaching.

Singing.

Reading and Recitation.

Drawing.

Needlework.

(b) The Training College Staff will indicate their opinion as to the proficiency of individual students in each of the subjects named by keeping a record of marks during the period of training. They will also keep a register showing the attendance of students at lessons in these subjects. These documents will be subject to the scrutiny of the Board or of their Inspector. Before the end of each academical year the Training College will submit to the Board lists of its outgoing students arranged in four groups according to their proficiency in each of these subjects. The Inspector will recommend marks for each subject after considering the lists and imposing such tests as he may think necessary.

(c) The Training College may, with the approval of the Board, terminate the course of instruction in any of the subjects above named, the Practice of Teaching excepted, by the end of the second year of training. If this is done, the grouped list should be submitted to the Board before the conclusion of the course in question.

(d) Students who have been exempted from Drawing or Needlework in accordance with Article 45 (c) should be included in these lists with the other students, and their proficiency in these subjects may be tested by the Inspector. Students who have been exempted from Singing on the ground that they are incapable of profiting by practical instruction in Music, should not be included in the lists.

48.—(a) Unless in one or more of the subjects an Alternative Examination has been approved by the Board, a Three Year Student must attend in the second or third year of training the Board's Final Examination in the Principles of Teaching and the Theory of Music (except as provided by Article 45 (e)). Three Year Students who devote their third year exclusively to professional training in accordance with Article 46 (e) must attend in that year the Board's Final Examination in Hygiene, and will be tested by the Board's Inspectors in Physical Training.

(b) The Board may require as a condition of accepting or continuing to accept an Alternative Examination in the Principles of Teaching that the questions to be set and the awards on the papers worked in this subject should be submitted for their approval.

(c) Three Year Students must, except as provided by Article 46 (a), attend, before the close of the calendar year in which their training course concludes, an approved Final University Examination for a Degree.

49.—(a) Except with the approval of the Board, Three Year Students must not be prepared for, or allowed to enter for, any external examinations in secular subjects other than those sanctioned in this chapter.

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(b) Approved courses of study and final examinations should not be departed from without the sanction of the Board. If in the opinion of the Authorities of a Training College it becomes desirable to alter an approved course of study or final examination, application for the Board's approval of the proposed changes should be made as early as possible.

CERTIFICATION OF THREE YEAR STUDENTS.

50.—(a) The Board will determine which Three Year Students have satisfactorily completed their period of training and are qualified for recognition as Certificated Teachers after considering the following:—

- (i) The results of the Final University Examination for a Degree taken by the students.
- (ii) The results of the Board's Final Examination, or of any alternative examination in the subjects mentioned in Article 48 (a).
- (iii) The grouped lists of students submitted by the Training Colleges under Article 47, together with the awards of the Inspectors upon those lists.

(b) A Three Year Student will not, as a rule, be determined to be qualified for recognition as a Certificated Teacher, unless he has passed a Final University Examination for a Degree, but the Board may, if they think fit, regard as so qualified a student who has failed to pass his Final Degree Examination, if he has passed satisfactorily in the Professional Subjects and is specially recommended by the College Authorities.

(c) A Three Year Student who is not considered by the Board to be qualified for recognition as a Certificated Teacher under the above paragraphs may be recognised as a temporarily Certificated Teacher for a period of two years and six months after leaving the Training College.

(d) A student recognised under the foregoing paragraph must, in order to qualify for permanent recognition as a Certificated Teacher under these Regulations, satisfy the Board during the period named in one or other of the following ways:—

- (i) If the student failed in his Final Degree Examination, and was not recommended by the College Authorities for special consideration, he must either pass the Final Degree Examination or pass the Board's Final Examination in such General Subjects as the Board may require.
- (ii) If the student failed in the Professional Subjects, he must pass such further examination in the Professional Subjects as the Board may require in his case.

(iii) If the student failed to reach a minimum standard of proficiency in Practical Teaching, he must pass a further test of proficiency in that subject to the satisfaction of the Inspector, in addition to passing in any examination that may be required of him under the above paragraphs.

(e) Three Year Students who have with the approval of the Board taken an Honours Course occupying four years and deferred their Final Examination for a Degree until a year after the end of their course of training (*see* Article 46 (a)), may be recognised during the fourth year of their Degree Course as temporarily Certificated Teachers. At the end of this year their recognition will be subject to the conditions of the foregoing paragraphs.

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CHAPTER VII.

COURSES OF TRAINING FOR SPECIAL
ELEMENTARY SCHOOLS.

51. Students may, subject to the conditions set out in this chapter, be admitted to courses of training specially designed to prepare them to teach in Special Elementary Schools of any one of the following types:—(a) Schools for blind children; (b) Schools for deaf children; (c) Schools for mentally defective children. Such courses of training may be in accordance with the provisions of either of the following subsections:—

- (i) A student, who has satisfactorily completed a period of training as a Two Year Student and who is regarded by the Board as qualified for recognition as a Certificated Teacher, may, subject to the general conditions set out in Chapter III., be recognised for a third year of training specially designed to prepare for work in any one of the three types of schools named above. The third year of training may be taken either at the Training College where the student was originally trained or at some other institution inspected by the Board, provided that the Training College or other institution has been specially approved by the Board as adapted to provide a course of the kind contemplated. Such a student, on satisfactorily completing his third year of training, may be recognised by the Board as a Certificated Teacher either in ordinary Public Elementary Schools or in the particular type of Special School with a view to which the third year of training was designed.
- (ii) A student may be admitted in the first instance for a Two Years' Course which is specially designed on its professional side to prepare for work in Special Schools of one of the three types mentioned above. The provisions as to courses of study, tests of proficiency, and certification applicable in the case of such a student will be those prescribed for students taking the Board's Final Examination in accordance with Chapter II., subject to the following modifications:—
 - (a) Instead of the ordinary syllabus for the Principles of Teaching set out in Appendix C, the student will take the syllabus adapted to his

special course of training, and the practical training of the student should be arranged as far as possible with reference to that syllabus.

(b) The courses of Hygiene and Physical Training and the course of Handwork will be modified so far as may be necessary in view of the special aim of the course of training.

A student who has completed satisfactorily such a period of training in accordance with the provisions of Chapter II., will be regarded by the Board as qualified for recognition as a Certificated Teacher in Special Elementary Schools of the type for which his course of training was adapted. He will also be regarded by the Board as qualified for recognition as an Uncertificated Teacher in ordinary Public Elementary Schools, and may become eligible for recognition as a Certificated Teacher in ordinary Public Elementary Schools, on completing a year of service in such a school and passing a supplementary examination in the Principles of Teaching according to the ordinary syllabus set out in Appendix C of these Regulations.

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CHAPTER VIII.

RESULT LISTS AND CERTIFICATES.

52. The Board will issue each year a list showing the names of all Training College students who have satisfactorily completed their periods of training during that year, and who have qualified for recognition as Certificated Teachers. The names of the students will be given in alphabetical order under each Training College. The list will also include the names of Certificated Students and Third Year Students who have satisfactorily completed their year or additional year of training as the case may be. The list will show the length of the period of training and the result of the Final Examination of each student, and will indicate the names of those students who have either—

- (a) passed with credit in the Ordinary Course in the subjects of (1) English, (2) History, (3) Geography, (4) Mathematics, (5) Welsh, (6) The Principles and Practice of Teaching, (7) Hygiene and Physical Training, or (8) Theory of Music and Singing;
- (b) passed with credit in any Advanced Course; or
- (c) passed with distinction in any Advanced Course.

The Board will also issue a supplementary list showing the names of all students who have, subsequently to their period of training, passed examinations qualifying them for recognition as Certificated Teachers, and who have satisfied the Board in the professional subjects of their course. Such students will be regarded as having completed satisfactorily a course of training approved by the Board under these Regulations for the purpose of Article 9 (a) (iii) of the Code.

53.—(a) The Certificate issued to a person who has obtained recognition as a Certificated Teacher under these Regulations will give (i) the name of the Training College in which the teacher was trained, (ii) the information with regard to his training and examination given in the list referred to in Article 52, and (iii) a statement of the subjects included in his course of study, with the exception of any subject in which his work was considered to be worthless.

(b) An entry will be made on the Certificate of a Certificated Student or of a Third Year Student who has satisfactorily completed a year, or an additional year, of training.

54. It is open to any College to publish, in each year, a list of its students who have satisfactorily completed their periods of training and obtained recognition as Certificated Teachers. The list may include also the names of Certificated and Third Year Students who have satisfactorily completed their year, or additional year, of training, as the case may be. Such a list may arrange the students in order of merit or in three classes, and the classification or order of merit may depend partly on the tests of proficiency required by the Board and partly on the College records of the work of each student.

CHAPTER IX.

INSPECTION OF TRAINING COLLEGES AND
HOSTELS.

55.—(a) The general inspection of Training Colleges will be entrusted to Inspectors selected for this special purpose, who will receive such assistance as may be necessary from other Inspectors of the Board, from the Board's special Inspectors of Music, Drawing, and other subjects, and from any other persons deputed by the Board for the purpose.

(b) A Training College or Hostel may be visited for the purpose of inspection at any reasonable time. The College Authorities, when desired, must give the Inspector facilities for assembling the students, for questioning them on any subject of instruction, and for examining their note-books and exercise books.

(c) The Inspector in charge of any particular College should be informed as long as possible beforehand of the date on which it is proposed to hold any formal inspection other than the Board's, or any approved examination other than those conducted by the Colleges or the Board themselves.

(d) When necessary the Inspector will report fully to the Board regarding the premises and the general arrangements of the College or Hostel (Articles 4 and 6). The Board must be satisfied that the courses of instruction are properly framed, that the conditions under which the staff work are suitable, that due care is taken with regard to the health and discipline of the students, that the attendances and absences of students are properly registered, that the Advanced Courses are suitable, and that the students who are permitted to read for University degrees are properly selected.

(e) The Inspector will inform the Board whether the students receive due instruction in the art of teaching, the Demonstration and Practising Schools are well adapted for teaching purposes, the students' work in them is properly supervised, and sufficient visits of observation are paid to schools of various types.

(f) The Inspector will report upon the methods according to which the students are instructed in Elementary Science, the Practice of Teaching, Reading and Recitation, Drawing, Needlework, Singing, and Physical Training, and will make his awards upon the grouped lists supplied by the College Authorities in these subjects in accordance with Articles 19, 20, and 47.

56. [Cancelled.]

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CHAPTER X.

GRANTS FOR THE MAINTENANCE OF TRAINING COLLEGES AND HOSTELS.

57. Subject to the fulfilment of the requirements of the Regulations, Annual Grants will be paid by the Board to the Governing Bodies of Recognised Training Colleges and Hostels on account of Recognised Students who have been trained during each academical year at the rates and in the manner stated in the following paragraphs :—

(a) On account of Resident Students, Grants at the rate of £53 (for men) or £38 (for women) are payable to the Governing Body of the Training College.

(b) On account of other Recognised Students, Grants at the rate of £13 are payable to the Governing Body of the Training College, and further Grants are payable as follows :—

(i) On account of Hostel Students, Grants at the rate of £40 (for men) or £25 (for women) are payable to the Governing Body of the Hostel ;

(ii) On account of Recognised Students who are resident members of Colleges in the Universities of Oxford and Cambridge, Personal Grants for the Students at the rate of £40 are payable to the Governing Bodies of the Elementary Training Departments of the Universities of Oxford and Cambridge ;

(iii) On account of other Recognised Students, Personal Grants for the Students at the rate of £25 (for men) or £20 (for women) are payable to the Governing Body of the Training College.

(c) When a University Department has been specially approved as providing a Four Years' Course in accordance with the conditions set out in the Appendix to the "Statement of Grants available from the Board of Education in aid of Technological and Professional work in Universities in England and Wales" (*see* Appendix D. to these Regulations), the Grant on account of Four Year Students will be payable in accordance with the provisions of Article 61, and the Grant on account of Three Year Students attending that Department will be payable in accordance with the provisions of paragraph (b) of this Article, except that any Grant on account of Hostel Students will be paid to the Governing Body of the Hostel through the University Authorities.

- (d) The Board will require to be satisfied, by receipts on Forms supplied by them for that purpose, that any Personal Grant paid under paragraph (b) (ii.) or (b) (iii.) above has either been applied towards meeting any fee approved under Article 4 (b) of these Regulations or has been paid to the Student by the Governing Body of the Training College. A deduction may be made from this Grant if the Board are not satisfied as to the industry and good behaviour of the Student.

58. The Board may, if they think fit, pay proportionate Grants on account of Recognised Students who have been trained during part of the year only, or on account of Recognised Students who have been resident in a recognised hostel for part of the year only.

59. When a Two Year Student has been recognised for a third year of training taken elsewhere than at the Training College at which the Student was originally trained, Grants will be paid in such manner and to such persons as the Board may think fit, and to such an amount, not exceeding £53 for a man or £38 for a woman, as the Board may determine after considering the arrangements made for the lodging and supervision of the Student.

60. Instalments of the Annual Grants are paid during the course of the Session upon a return of the number of Students in training at the beginning of the Session. The balances of the Grants are paid as soon as possible after the close of the Session of each College, and are subject to adjustment in the case of any overpayment or underpayment of instalments and to any deductions made under Article 78.

61. The grants on account of Four Year Students will be paid at the following rates :—

- (a) On account of each student who is following a course of study leading to a Degree, an annual grant will be paid in respect of (i) the composition fee ordinarily charged by the University Institution for the course taken by the student, and (ii) the general supervision of the student by the Authorities of the Training Department. If no composition fee is charged by the University the grant will be assessed upon the basis of such fee or fees as may be approved by the Board.
- (b) On account of each student in the last year of the course, a grant will be paid at a rate not exceeding 35*l.* to be determined by the Board after consideration of the report of the Inspector and the accounts of the Training Department. When a student takes a

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special course under paragraph 3 (b) of Appendix D, a grant will be paid for the last year of his course at a rate not exceeding 25*l.*

- (e) For each year of the course grants will be paid in respect of the students' maintenance at the rates of 35*l.* on account of each man student and 25*l.* on account of each woman student resident in a Hostel, and 15*l.* on account of each man student and 10*l.* on account of each woman student not resident in a Hostel. The Board will require to be satisfied by receipts on prescribed Forms that these sums have been handed over by the University Authorities to the Governing Body of the Hostel, if the student is resident in a Hostel, or to the student personally if the student is not resident in a Hostel.
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CHAPTER XI.

CERTIFIED TRAINING COLLEGES.

62.—(a) Training Colleges which do not fulfil all the conditions set forth in the preceding chapters may, if the Board are satisfied as to their educational efficiency, be certified as supplying efficient training for Private Students. Such Colleges will be known as Certified Training Colleges.

(b) Private Students who are admitted to such Colleges may, if they have satisfied the conditions of admission, and if they follow the Courses of Study and pass the tests of proficiency prescribed in the case of Recognised Students in Chapters II. to VII. of these Regulations, be regarded by the Board as qualified by attainments for recognition as Certificated Teachers.

(c) Certified Training Colleges must fulfil the requirements as to inspection set forth in Chapter IX., and must fulfil the general conditions set forth in Chapter I., so far as the Board may consider necessary. But they will not be required to fulfil the conditions set forth in Articles 7 (g) or 7 (h) or Article 8.

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CHAPTER XII.

GRANTS IN AID OF THE ESTABLISHMENT OF
TRAINING COLLEGES AND HOSTELS.

63. The Board may make Grants (hereinafter called Building Grants) to Local Education Authorities in aid of the provision, enlargement, or improvement of Training Colleges or Hostels.

64.—(a) So much of any Building Grant as is made in respect of the acquisition of a site will not exceed 75 per cent. of the cost of the acquisition of the site.

(b) So much of any Building Grant as is made in respect of the provision of a building or the preparation of a site will not exceed—

(i) 75 per cent. of the capital expenditure on the purpose in question, or

(ii) an amount calculated at the rate shown in the second column of the following Table for each place provided for a Recognised Student,

whichever is the less.

(c) Where, in the opinion of the Board, excessive expenditure has been incurred, or where any part of the premises is available for use by Students other than Recognised Students, the Board will have regard to that fact in calculating the amount payable under this regulation, and the amount which would otherwise be payable will be reduced accordingly.

(d) Where any Building Grant is made in respect of the adaptation of an existing building to the purposes of a Training College or Hostel, or in respect of the enlargement or improvement of the existing building of a Training College or Hostel, the amount of the Grant will be such as the Board think reasonable, having regard to the rules contained in this Article and to the circumstances of the case.

Description of Premises.	Limit of Grant for each Place provided.
1. Residential Training College in which provision is made for the instruction and residence of the Students in separate blocks :—	£
(a) educational block - - - - -	75
(b) residential block - - - - -	135
2. Residential Training College in which provision is made for the instruction and residence of the Students in a single block - - - - -	195
3. Day Training College without provision for the residence of the Students - - - - -	90
4. Day Training College erected as part of a scheme involving the provision of Hostels - - - - -	75
5. Hostel - - - - -	135

65. The Board may make Building Grants to Universities or University Colleges in aid of the provision of Hostels. Any Grant so paid will not exceed an amount calculated in accordance with the rules contained in Article 64. Any application for a Grant under this Article must be supported by the Local Education Authority, and the Board will require to be satisfied that the Authority will defray such portion of the cost of providing the Hostel (or of providing the number of places reserved for Recognised Students, if the Hostel is not reserved exclusively for Recognised Students) as is not covered by the Building Grant.

66. The Board must be satisfied that adequate arrangements have been made to ensure the suitable management of the College or Hostel.

67. The building must be clearly distinguishable from any neighbouring buildings, and the whole accommodation provided in the building must be shown to the satisfaction of the Board to be needed for the purpose of a Training College or of a Hostel.

68. A leasehold site will not be accepted where a freehold site can be obtained, and no lease should be for a shorter term than 99 years.

69. The plans must be approved by the Board.

70. The Board will require an undertaking under the Seal of the Local Education Authority (or of the University or University College) that the building in respect of which a claim for Grant has been made will not be used for purposes other than those of a Training College, or of a Hostel, as the case may be, at any such time, or in any such manner, as would interfere with the work of the College or Hostel. The undertaking must give the Board power to require the repayment of the whole or a part of the Grant if this condition ceases to be satisfied, or if the College or Hostel ceases to be conducted in accordance with the requirements of the Regulations of the Board for the Training of Teachers for Elementary Schools in force for the time being.

71. [Cancelled.]

72. No Grant will be paid in respect of any building or enlargement for which the building contract was completed before the 16th of March 1904. In the case of the purchase of an existing building or of a site, the contract for the sale must have been completed subsequently to the above date.

Grants in Aid for Renting Temporary Premises.

73. Where the Board are satisfied that it is desirable to provide temporary premises owing to the fact that permanent

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premises cannot at once be provided, or that it is for the moment impossible to say for how many Students accommodation is required, a Grant in aid for renting temporary premises may be made each year of (a) the amount of £3 per place provided, or (b) 75 per cent. of the rent, whichever is the less, provided that the conditions set forth in the preceding part of this Chapter are satisfied so far as the Board may consider necessary under the circumstances.

74. The Board will require a fresh application for the Grant in each year. No Grant will, as a rule, be paid for more than five years.

75. The premises and the rent to be paid must be approved by the Board.

76. The premises must not be used for purposes other than those of a training College or of a Hostel at such a time or in such a manner as to interfere with the work of the College or Hostel.

77. No grant will be paid until the Board are satisfied that the rent has actually been paid and that the College or Hostel is being conducted in accordance with the Regulations of the Board for the Training of Teachers for Elementary Schools in force for the time being.

CHAPTER XIII.

GENERAL CONDITIONS.

78. The payment of the Grants provided for by these Regulations is subject to the fulfilment of the requirements of the Regulations, but if any of the requirements have not been fulfilled or have been fulfilled during part of the year only, the Board may nevertheless pay Grants either without deduction or with such deduction as they may think fit.

79.—(a) Unless the Regulations expressly provide otherwise, students in a Training College will not be required to comply with any conditions as to courses of study, examinations, or certification, other than those which were imposed by the Regulations under which they began their course of training.

(b) The provisions as to the Examination and Certification of students contained in Articles 28 and 50 of these Regulations may at the request of the Authorities of any College be applied, with any necessary modifications, to students admitted from 1912 or from any earlier date.

(c) Subject to the above conditions these Regulations will come into force on August 1st, 1913, and will continue to be operative until other Regulations come into force.

80. The decision of the Board as regards the interpretation of these Regulations is final.

L. A. SELBY-BIGGE.

May 5, 1913.

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APPENDIX A. (I.).

LIST OF EXAMINATIONS QUALIFYING FOR ADMISSION TO A
TRAINING COLLEGE.

N.B.—(1) A candidate who has passed one of the examinations named in this list in accordance with the conditions stated in each case will be regarded as qualified for admission to a Training College as a Two Year Student following the ordinary course. For the conditions needed to qualify for admission to a Degree Course reference should be made to Appendix A. (II.).

(2) The Examination must have been passed, as a rule, within the two years and six months preceding August 1st in the year of entering the Training College, but the Board are prepared to consider applications from Training College Authorities for the admission of Students whose qualifying Examinations were passed at some earlier date, provided that the College Authorities can certify that these Students are fitted to undertake the courses proposed for them.

(3) Qualifications composed of successes, not all of which were obtained at one and the same examination, will not be accepted by the Board as a rule unless all the component successes have been obtained from the same Examining Body within the two years and six months preceding admission to the Training College.

1. The Preliminary Examination for the Elementary School Teachers' Certificate.
2. The Higher Certificate Examination of the Oxford and Cambridge Schools Examination Board.
3. The School Certificate Examination of the Oxford and Cambridge Schools Examination Board, if the candidate satisfies the Examiners in the following subjects :—
 - (a) English;
 - (b) English History;
 - (c) Geography;
 - (d) Mathematics;
 - (e) Latin, Greek, French, or German.

If History and Geography are taken as a combined subject, a fifth subject must be taken.

4. The Senior Local Examination of the University of Oxford, if the candidate satisfies the Examiners in the following subjects :—
 - (a) Arithmetic;
 - (b) English Language and Literature;
 - (c) English History;
 - (d) Geography;
 - (e) Either Mathematics, or Physics, or Chemistry, or Botany, or a language other than English.
5. The Senior Local Examination of the University of Cambridge, if the candidate satisfies the Examiners in the following subjects :—
 - (a) Arithmetic;
 - (b) English Language and Literature;
 - (c) English History;
 - (d) Geography;
 - (e) Either Mathematics, or Physics, or Chemistry, or Botany, or a language other than English.

6. The Matriculation Examination of the University of Durham (Newcastle Division).
7. The Matriculation Examination of the University of London.
8. The Senior School Examination of the University of London, if the candidate satisfies the Examiners either in the subjects required for Matriculation or in the following five subjects :—
 - (a) Arithmetic;
 - (b) English;
 - (c) Modern History;
 - (d) Geography;
 - (e) Either Mathematics (if taken as a subject distinct from Arithmetic) or Physics, or Chemistry, or Botany, or a language other than English.

If History and Geography are taken as a combined subject, a fifth subject must be taken.
9. The Matriculation Examination of the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield.
10. The Senior School Certificate Examination of the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield, if the candidate satisfies the Examiners either in the subjects required for Matriculation, or in the following six subjects :—
 - (a) English Literature;
 - (b) English History;
 - (c) Geography;
 - (d) Mathematics;
 - (e) and (f) Two other subjects.
11. The Matriculation Examination of the University of Birmingham, and the Examination for such Senior School Certificates of the University as exempt the holders from a Matriculation Examination.
12. The Matriculation Examination of the University of Bristol, if the candidate satisfies the Examiners in English Literature.
13. The Matriculation Examination of the University of Wales.
14. The Senior Certificate of the Central Welsh Board, if the candidate satisfies the Examiners either in all the six subjects required for Matriculation in the University of Wales, or in the following subjects :—
 - (a) English Language and English Literature (Schedule 2 (c) and 2 (d));
 - (b) Arithmetic;
 - (c) History;
 - (d) Geography;
 - (e) Either Elementary Mathematics, or Physics, or Chemistry, or Botany, or a Language other than English.
15. Any corresponding or higher Examination approved for the purpose by the Board.

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APPENDIX A. (II.).

LIST OF EXAMINATIONS QUALIFYING FOR ADMISSION TO
DEGREE COURSES IN TRAINING COLLEGES.

N.B.—(1) Candidates wishing to be prepared for an examination forming a recognised stage towards a University Degree must, in addition to being qualified in accordance with the conditions stated in this Appendix, be qualified under the University Regulations to enter upon a full course of study for a Degree without further examination. This Appendix does not attempt to set out the several conditions under which each of the examinations named in it is accepted by the various Universities as exempting Students from their Matriculation Examinations. For information as to this, candidates should consult the Regulations of the Universities for whose Degrees they wish to study.

(2) The Examination must have been passed, as a rule, within the two years and six months preceding August 1st in the year of entering the College, but the Board are prepared to consider applications from Training College Authorities for the admission of Students whose Qualifying Examinations were passed at some earlier date, provided that the College Authorities can certify that these Students are fitted to undertake the courses proposed for them.

(3) Qualifications composed of successes, not all of which were obtained at one and the same examination, will not be accepted by the Board as a rule unless all the component successes have been obtained from the same Examining Body within the two years and six months preceding admission to the College.

1. The Higher Certificate of the Oxford and Cambridge Schools Examination Board, if the candidate satisfies the Examiners in the following subjects* :—

- (a) English;
- (b) History, provided that the candidate takes one of the two periods of English History;
- (c) Geography;
- (d) Elementary Mathematics, together with the Algebra and Geometry of Additional Mathematics from Group II.;
- (e) Either Latin or Greek, or French or German;
- (f) Either a second language, or Natural Philosophy (Physical Division), or Natural Philosophy (Chemical Division), or Experimental Science, or Botany.

2. The School Certificate Examination of the Oxford and Cambridge Schools Examination Board, if the candidate satisfies the Examiners in the following subjects :—

- (a) English Literature (provided that in this subject the candidate passes in the English Literature Syllabus prescribed for the Higher Certificate Examination);
- (b) English History;
- (c) Geography;
- (d) Elementary Mathematics;
- (e) Latin, Greek, French or German;
- (f) Either a second language or a Science subject.

* For the present the Board are prepared to consider on their merits, for the purpose of this Appendix, Higher Certificates of the Oxford and Cambridge Schools Examination Board which do not comply exactly with the conditions mentioned.

3. The Senior Local Examination of the University of Oxford, if the candidate satisfies the Examiners in the following subjects:—

- (a) English Language and Literature (Section 4), (provided that the candidate passes in English Composition and in Division (b) or (c) or (d));
- (b) English History (Section 3 (c));
- (c) Geography (Section 5);
- (d) Arithmetic (Section 1) and Mathematics (Section 13);
- (e) One language selected from Latin, Greek, French and German (Sections 7 to 10);
- (f) Either a second language, or Physics (Section 17), or Chemistry (Section 16), or Botany (Section 15).

4. The Senior Local Examination of the University of Cambridge, if the candidate satisfies the Examiners in the following subjects:—

- (a) English Language and Literature (Section 2), (provided that the candidate passes in English Composition and in paper (d) or (e) of Section 2);
- (b) English History (Section 3 (a));
- (c) Geography (Section 3 (d));
- (d) Mathematics (Section 10);
- (e) One language selected from Latin, Greek, French and German (Sections 4-7);
- (f) Either a second language, or Physics (Section 12), or Chemistry (Section 11), or Botany (Section 13 (a)).

5. The Matriculation Examination of the University of Durham (Newcastle Division), if the candidate satisfies the Examiners in the following subjects:—

- (a) English;
- (b) English History;
- (c) Geography;
- (d) Mathematics;
- (e) One language selected from Latin, Greek, French, and German;
- (f) A second language, or Physics, or Chemistry, or Botany.

6. The Matriculation Examination or the Senior School Examination of the University of London, if the candidate satisfies the Examiners in the following subjects:—

- (a) English;
- (b) Modern History;
- (c) Geography;
- (d) Mathematics;
- (e) One language selected from Latin, Greek, French, and German;
- (f) Either a second language, or Physics, or Chemistry, or Botany.

N.B.—A pass in the combined subject of History and Geography will be accepted in place of a pass in History and Geography separately.

7. The Matriculation Examination of the Joint Matriculation Board for the Universities of Manchester, Liverpool, Leeds, and Sheffield, or the Senior School Certificate Examination conducted by that Board, if the candidate satisfies the Examiners in the following subjects:—

- (a) English Literature;
- (b) English History;
- (c) Geography;
- (d) Mathematics;
- (e) One language selected from Latin, Greek, French, and German;
- (f) Either a second language, or Physics, or Chemistry, or Botany.

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8. The Matriculation Examination or the Senior School Examination of the University of Birmingham, if the candidate satisfies the Examiners in the following subjects:—

- (a) English Literature;
- (b) English History;
- (c) Geography;
- (d) Mathematics;
- (e) One language selected from Latin, Greek, French, and German;
- (f) Either a second language or Chemistry, or Botany.

9. The Matriculation Examination of the University of Bristol, if the candidate satisfies the Examiners in the following subjects:—

- (a) English Grammar and Composition;
- (b) English Literature;
- (c) English History;
- (d) Geography;
- (e) Mathematics;
- (f) One language selected from Latin, Greek, French and German;
- (g) Either a second language, or Physics, or Chemistry.

10. The Examination for the Senior Certificate of the Central Welsh Board, if the candidate satisfies the Examiners in the following subjects:—

- (a) English Language and Literature (Schedule 2 (c) and 2 (d));
- (b) History (Schedule 2 (b));
- (c) Geography;
- (d) Mathematics;
- (e) One language selected from Latin, Greek, French, and German;
- (f) Either a second language, or Physics, or Chemistry, or Botany.

11. Any corresponding or higher examination approved for the purpose by the Board.

Special conditions under which candidates who have not passed any of the Qualifying Examinations above mentioned may be admitted to certain Training Departments:—

- (1) Candidates may be admitted to the Oxford University Elementary Training College if they have passed Responsions, and have also obtained a pass in the Oxford or Cambridge Senior Local Examination in the subjects of English, History, and Geography.
 - (2) Candidates may be admitted to the Cambridge University Elementary Training Department if they have passed the Previous Examination, and have also obtained a pass in the Oxford or Cambridge Senior Local Examination in the subjects of English, History, and Geography.
 - (3) Candidates may be admitted to the Elementary Training Departments of the University Colleges of Aberystwyth, Bangor, or Cardiff, if they have passed the Matriculation Examination of the University of Wales, and have also obtained a pass in Geography in the examination in that subject conducted by the Inter-Collegiate Board of the three University Colleges.
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APPENDIX A. (III.).

LIST OF QUALIFYING EXAMINATIONS FOR ONE YEAR STUDENTS.

N.B.—(1) The Examination must have been passed, as a rule, within the two years and six months preceding August 1st in the year of entering the Training College, but the Board are prepared to consider applications from Training College Authorities for the admission of Students whose qualifying Examinations were passed at some earlier date, provided that the College Authorities can certify that these students are fitted to undertake the courses proposed for them.

(2) Qualifications composed of successes, not all of which were obtained at one and the same examination, will not be accepted by the Board as a rule unless all the component successes have been obtained from the same Examining Body within the two years and six months preceding August 1st in the year of entering the College.

1. The Final Degree Examination of any University in the British Isles.
2. The Examination for the Diploma of Associate in Letters of University College, Reading.
3. The Examination for the Diploma of Associate in Science of University College, Reading.
4. Such School Leaving Certificate Examinations conducted by a University as may be approved by the Board, provided that Special Advanced Papers are taken in English, a foreign language, and one other subject.
5. The Higher Local Examination of the University of Oxford, provided that the candidate has obtained a Certificate and satisfied the Examiners in the following subjects taken at one examination :—
 - (a) Arithmetic and English (Section F);
 - (b) Either Mathematics (Section D), or Natural Science (Section H);
 - (c) Either Languages (Section A), or Modern History (Section C), or Geography (Section K).
6. The Higher Local Examination of the University of Cambridge, provided that the candidate has obtained a Certificate and satisfied the Examiners in the following subjects taken at one examination :—
 - (a) Arithmetic and English (Group A);
 - (b) Either Mathematics (Group C), or Science (Group E);
 - (c) Either Languages (Group B), or Geography (Group G), or History (Group H).
7. Any corresponding or higher Examination approved for the purpose by the Board.

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APPENDIX B.

FORMS OF UNDERTAKING to be executed by Students in accordance with Article 10 (b) of the Regulations.

NOTE.—The following are the Forms of Undertaking for Students attending (i) a Training College provided by a Local Education Authority or other Corporation possessing a Common Seal, or (ii) a Training College provided by a Governing Body consisting of individual Governors. All the students of the same sex will sign the same Form of Undertaking.

For Men Students, the words in square brackets in these Forms are to be omitted. For Women Students, the words in square brackets are to be substituted for the corresponding words which immediately precede them.

I.

Form of Undertaking for Students attending a Training College provided by a Local Education Authority or other Corporation possessing a Common Seal.

THIS INDENTURE made the day of 19 , BETWEEN the Board of Education (hereinafter called "the Board") of the first part, the (hereinafter called "the Training College Authority") of the second part, and the persons whose names and addresses are set out in the Schedule hereto (hereinafter called "the Students") each for *himself* [*herself*] of the third part:—

WHEREAS it is enacted by section 4 of the Education (Administrative Provisions) Act, 1909, that where with a view to following the profession of teacher, a person has in pursuance of regulations made by the Board of Education, entered into an undertaking that *he* [*she*] will, in consideration of any grant made by the Board in respect of *his* [*her*] maintenance, education, and training, complete the course of education or training specified in the undertaking, and will subsequently follow the profession of teacher in the manner and for the period specified in the undertaking, and in the event of failure to do so will repay to the Board such proportion of the grants made by the Board as is specified in the undertaking, the undertaking shall be binding on *him* [*her*] notwithstanding that *he* [*she*] was an infant at the time when the undertaking was given, and any sums repayable in accordance with the undertaking shall be recoverable as debts to the Crown;

AND WHEREAS each of the Students with a view to following the profession of teacher has made application to the Training College Authority for admission to the (hereinafter called "the Training College");

AND WHEREAS the Training College Authority are willing to admit each of the Students to the Training College;

AND WHEREAS each of the Students has agreed to enter into such an undertaking as is mentioned in the said Act with a view to *his* [*her*] recognition by the Board as a Student in respect of whom grants may become payable by the Board under the Regulations for the Training of Teachers for Elementary Schools in force for the time being (hereinafter called "the Regulations");

NOW THIS INDENTURE WITNESSETH AS FOLLOWS:—

1. Each of the Students, in consideration of the grants in respect of *his* [her] maintenance, education, and training, undertakes to the Board that *he* [she] will complete in the Training College a course of training approved by the Board in accordance with the Regulations for the approved period (that is to say, the period for which *he* [she] is admitted or any other period which may be substituted for that period under the Regulations), and will upon completion of the course of training follow the profession of Teacher in an Approved School and complete not less than *seven* [five] years' service in that profession within the period of obligation (that is to say, within *ten* [eight] years of the first day of August next after the completion of *his* [her] course of training), or make repayment as herein-after specified.

2. If a Student before the completion of *his* [her] course of training leaves or is with the approval of the Board dismissed from the Training College, *he* [she] will repay to the Board an amount equal to the grants paid or payable by the Board under the Regulations in respect of *his* [her] maintenance, education, and training.

3. Each Student will, on every thirty-first day of July, during the period of obligation, furnish to the Board such evidence as the Board may prescribe with respect to *his* [her] occupation during that period.

4. If on the thirty-first day of July in any year within the period of obligation the periods in respect of which a Student has failed to show to the satisfaction of the Board that *he* [she] has served as a Teacher in an Approved School amount in the aggregate to more than three years, the Student shall on or before the thirty-first day of December then next following pay to the Board a proportion of the aggregate amount of the grants paid by the Board in respect of *his* [her] maintenance, education, and training, calculated in accordance with the provisions of this Indenture, in respect of the period of default (that is to say, the time by which the period during which *he* [she] has so failed exceeds three years).

5. The sum to be so paid on or before any and every such thirty-first day of December shall bear the same proportion to the aggregate amount of the grants so paid that the period of default bears to *seven* [five] years:

Provided that—

(a) In calculating the amount of a second or subsequent payment, any amount previously paid by the Student shall be deducted from the amount to be paid by *him* [her]:

(b) In calculating the period of default for the purposes of this Indenture, an allowance shall be made to the Student on account of the time occupied in school holidays in respect of each twelve months commencing on each first day of August, equivalent, where the Student has been in continuous employment for that twelve months, to the time actually occupied in school holidays, and, where the Student has not been in such continuous employment, to such a time as the Board, having regard to the period ordinarily so occupied and to all the circumstances of the case, may think just:

(c) If it is shown to the satisfaction of the Board that any such failure as aforesaid has been caused by illness, by inability (not due to the Student's own default) to find employment at the current rate of salary payable to teachers of the same grade and sex, or by any other cause which in the opinion of the Board was not due to the default of the Student, the period during which the failure so caused continues shall not be taken into account in calculating the period of default.

6. Subject to the payment of such fees, if any, as are approved by the Board the Training College Authority undertake to admit each of the Students to the Training College as a recognised Student for the approved period

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(exclusive of ordinary holidays or of any period of suspension from attendance) and to enable *him* [*her*] there to pursue *his* [*her*] course of training in accordance with the Regulations unless and until *he* [*she*] leaves or is with the approval of the Board dismissed from the Training College.

7. The Board will if the Student is recognised by them for admission to the Training College from time to time pay to the person or persons to whom grants are payable under the Regulations in respect of the maintenance education, and training of the Students such sums as are payable in respect of each of the Students in accordance with those Regulations.

8. Any breach by the Board or by the Training College Authority of any provision of this Indenture as respects any Student shall not operate to release any other Student from the obligations undertaken by *him* [*her*] under this Indenture.

9. In this Indenture the expression "Approved School" includes any Public Elementary School, and any School certified under the Elementary Education (Blind and Deaf Children) Act, 1893, or under the Elementary Education (Defective and Epileptic Children) Act, 1899, and any Poor Law School, Certified Industrial School, Day Industrial School, or Certified Reformatory School, in England or Wales, and any Army or Navy School, and any Secondary School, Pupil-Teacher Centre, or Training College, in respect of which grants are paid by the Board out of moneys provided by Parliament, and any other School which in the case of any Student the Board approve in writing for the purposes of this Indenture.

IN WITNESS WHEREOF the Board and the Training College Authority have hereunto set their respective seals and the parties hereto of the third part have hereunto set their respective hands and seals the day and year first above written.

THE SCHEDULE ABOVE REFERRED TO.

THE STUDENTS.

(Names and Addresses.)

Signed, sealed, and delivered by the
persons whose names are set out
in the Schedule hereto in the
presence of } (Signatures and seals of Students.)

Sealed by Order of the Board of
Education. } (Seal of Board.)

Sealed with the Common Seal of
in the presence of } (Seal of Training College Authority.)

II.

Form of Undertaking for Students attending a Training College provided by a Governing Body consisting of individual Governors.

THIS INDENTURE made the day of 19 ,
 BETWEEN the Board of Education (hereinafter called "the Board") of
 the first part, of and
 of being two Governors of the Training College
 authorised by resolution of the Governors to execute this Indenture on
 behalf of the Governors of the said Training College (hereinafter called "the
 Training College Governing Body") of the second part, and the persons
 whose names and addresses are set out in the Schedule hereto (hereinafter
 called "the Students") each for *himself* [*herself*] of the third part :—

WHEREAS it is enacted by Section 4 of the Education (Administrative Provisions) Act, 1909, that where with a view to following the profession of teacher, a person has, in pursuance of regulations made by the Board of Education, entered into an undertaking that *he* [*she*] will, in consideration of any grant made by the Board in respect of *his* [*her*] maintenance, education, and training, complete the course of education [or training] specified in the undertaking, and will subsequently follow the profession of teacher in the manner and for the period specified in the undertaking, and in the event of failure to do so will repay to the Board such proportion of the grants made by the Board as is specified in the undertaking, the undertaking shall be binding on *him* [*her*] notwithstanding that *he* [*she*] was an infant at the time when the undertaking was given, and any sums repayable in accordance with the undertaking shall be recoverable as debts to the Crown.

AND WHEREAS each of the Students with a view to following the profession of Teacher has made application to the Training College Governing Body for admission to the said Training College (hereinafter called "the Training College") ;

AND WHEREAS the Training College Governing Body are willing to admit each of the Students to the Training College ;

AND WHEREAS each of the Students has agreed to enter into such an undertaking as is mentioned in the said Act with a view to *his* [*her*] recognition by the Board as a Student in respect of whom grants may become payable by the Board under the Regulations for the training of Teachers for Elementary Schools in force for the time being (hereinafter called the "Regulations") ;

NOW THIS INDENTURE WITNESSETH AS FOLLOWS :—

1. Each of the Students, in consideration of the grants in respect of *his* [*her*] maintenance, education, and training, undertakes to the Board that *he* [*she*] will complete in the Training College a course of training approved by the Board in accordance with the Regulations for the approved period that is to say, the period for which *he* [*she*] is admitted or any other period which may be substituted for that period under the Regulations, and will upon completion of the course of training follow the profession of teacher in an Approved School and complete not less than *seven* [*five*] years' service in that profession within the period of obligation (that is to say, within *ten* [*eight*] years of the first day of August next after the completion of *his* [*her*] course of training), or make repayment as hereinafter specified.

2. If a Student before the completion of *his* [*her*] course of training leaves or is with the approval of the Board dismissed from the Training College, *he* [*she*] will repay to the Board an amount equal to the grants

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paid or payable by the Board under the Regulations in respect of his [her] maintenance, education, and training.

3. Each Student will, on every thirty-first day of July during the period of obligation, furnish to the Board such evidence as the Board may prescribe with respect to his [her] occupation during that period.

4. If on the thirty-first day of July in any year within the period of obligation the periods in respect of which a Student has failed to show to the satisfaction of the Board that he [she] has served as a Teacher in an Approved School amount in the aggregate to more than three years, the Student shall on or before the thirty-first day of December then next following pay to the Board a proportion of the aggregate amount of the grants paid by the Board in respect of his [her] maintenance, education, and training, calculated in accordance with the provisions of this Indenture, in respect of the period of default (that is to say, the time by which the period during which he [she] has so failed exceeds three years).

5. The sum to be so paid on or before any and every such thirty-first day of December shall bear the same proportion to the aggregate amount of the grants so paid that the period of default bears to seven [five] years:

Provided that—

- (a) In calculating the amount of a second or subsequent payment, any amount previously paid by the Student shall be deducted from the amount to be paid by him [her];
- (b) In calculating the period of default for the purposes of this Indenture, an allowance shall be made to the Student on account of the time occupied in school holidays in respect of each twelve months commencing on each first day of August, equivalent, where the Student has been in continuous employment for that twelve months, to the time actually occupied in school holidays, and, where the Student has not been in such continuous employment, to such a time as the Board, having regard to the period ordinarily so occupied and to all the circumstances of the case, may think just;
- (c) If it is shown to the satisfaction of the Board that any such failure as aforesaid has been caused by illness, by inability (not due to the Student's own default) to find employment at the current rate of salary payable to teachers of the same grade and sex, or by any other cause which in the opinion of the Board was not due to the default of the Student, the period during which the failure so caused continues shall not be taken into account in calculating the period of default.

6. Subject to the payment of such fees, if any, as are approved by the Board the Training College Governing Body undertake to admit each of the Students to the Training College as a recognised Student for the approved period (exclusive of ordinary holidays or of any period of suspension from attendance) and to enable him [her] there to pursue his [her] course of training in accordance with the Regulations, unless and until he [she] leaves or is with the approval of the Board dismissed from the Training College.

7. The Board will, if the Student is recognised by them for admission to the Training College, from time to time pay to the person or persons to whom grants are payable under the Regulations in respect of the maintenance, education, and training of the Students such sums as are payable in respect of each of the Students in accordance with those Regulations.

8. Any breach by the Board or by the Training College Governing Body of any provision of this Indenture as respects any Student shall not operate to release any other Student from the obligations undertaken by him [her] under this Indenture.

9. In this Indenture the expression "Approved School" includes any Public Elementary School, and any School certified under the Elementary Education (Blind and Deaf Children) Act, 1893, or under the Elementary Education (Defective and Epileptic Children) Act, 1899, and any Poor Law School, Certified Industrial School, Day Industrial School, or Certified Reformatory School, in England or Wales, and any Army or Navy School, and any Secondary School, Pupil-Teacher Centre, or Training College, in respect of which grants are paid by the Board out of moneys provided by Parliament, and any other School which in the case of any Student the Board approve in writing for the purposes of this Indenture.

IN WITNESS WHEREOF the Board have hereunto set their seal and the parties hereto of the second and third parts have hereunto set their respective hands and seals the day and year first above written.

THE SCHEDULE ABOVE REFERRED TO.

THE STUDENTS.

(Names and Addresses.)

Signed, sealed, and delivered by the
persons whose names are set out
in the Schedule hereto in the
presence of } *(Signatures and seals of Students.)*

Sealed by Order of the Board of
Education. } *(Seal of Board.)*

Signed, sealed, and delivered by the
within-named } *(Signatures and seals of two Governors
authorised to execute by the Train-
ing College Governing Body.)*
on behalf of the
Training College Governing Body
in the presence of }

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APPENDIX C.

PREFATORY NOTE.

(1) The Syllabuses upon which the Board's Final Examination will be held in 1914 will be those given in Appendix C. and Appendix D. of the Regulations for the Training of Teachers for Elementary Schools for 1912. [Cd. 6350.] All students proposing to attend the Board's Final Examination in 1914 must therefore study any of the subjects on which they will then be examined in accordance with those Syllabuses.

(2) Two Year Students admitted in 1912 and One Year Students and Certificated Students admitted in 1913 will fall under the conditions as to courses of study, examinations and certification contained in the Regulations of 1912, and not under these Regulations.

(3) Two Year Students admitted in 1913 will fall under the conditions as to courses of study, examinations and certification contained in these Regulations, subject to the exception that students presenting themselves for examination in any Ordinary Course in 1914 will be examined not on the Syllabus for that course set out in these Regulations but on one of the Syllabuses set out for the corresponding subject in the Regulations for 1912, as follows:—

- (a) A student taking an Ordinary Course in English may be examined on any one of the shortened courses in English Literature and Composition set out in the Regulations for 1912.
- (b) A student taking an Ordinary Course in History may be examined on any one of the Schemes I. to VI. set out under the head of "History and Geography" in the Regulations for 1912, a shortened course being taken whenever provision is made for this in the Regulations.
- (c) A student taking an Ordinary Course in Geography will be examined on Scheme VII. set out under the head of "History and Geography" in the Regulations for 1912.
- (d) A student taking an Ordinary Course in Mathematics will be examined on the Syllabus in Elementary Mathematics prescribed for men students in the Regulations for 1912. Women students wishing to take an Ordinary Course in Mathematics will be examined on the same Syllabus as men students.
- (4) No student will be examined on any Advanced Course in 1914.
- (5) In 1915 the examination of all students will be conducted in accordance with these Syllabuses.

A.—GENERAL SUBJECTS.

(1) English.

Provision is made for an Ordinary and an Advanced Course, each Course admitting of variation within its limits. All students will be required to write an Essay. Students taking certain Advanced Courses in History will be exempted from examination in English Literature, but not from the Essay. It will be understood that it is not the Board's desire that the general reading of the students should necessarily be confined to the works prescribed for that purpose.

Ordinary Course.

1. For detailed study.

One of the following plays of Shakespeare:—

Twelfth Night.
Coriolanus.

2. For general reading.

(a) One of the following plays of Shakespeare:—

Richard III.
Henry IV. (Part I.).

(b) An anthology of English verse. It is suggested that one of the following books should be used, but the list is not exhaustive:—

The Golden Treasury of Songs and Lyrics (Oxford Edition), The Oxford Book of Verse (A. T. Q. Couch), The Paradise of English Poetry (H. C. Beeching), The Open Road (E. V. Lucas), English Lyrics from Chaucer to Poe (W. E. Henley), The Flower of the Mind (Mrs. Meynell).

(c) Two of the following:—

- (1) Macaulay: Essays on Frederick the Great and Warren Hastings.
- (2) R. L. Stevenson: Across the Plains.
- (3) Carlyle: Past and Present.
- (4) Robert Browning: Selections.

(d) Two of the following:—

- (1) Scott: Old Mortality.
- (2) Brontë: Villette.
- (3) Thackeray: Vanity Fair.
- (4) Trollope: Barchester Towers.
- (5) Stevenson: The New Arabian Nights.
- (6) Dickens: Nicholas Nickleby.
- (7) Gaskell: North and South.
- (8) Blackmore: Lorna Doone.
- (9) Austen: Persuasion and Northanger Abbey.

3. The outlines of English Syntax and Composition.

Advanced Course.

1. For detailed study.

Either (a) A fuller study of Shakespeare, with special reference to the following plays:—

King Lear.
Hamlet.
Twelfth Night.
Coriolanus.

or (b) Milton: Paradise Lost XI. and XII., Comus, Lycidas, and the Sonnets.

2. For general reading.

(a) One of the following:—

- (1) Pope: Essay on Man, III. and IV.
- (2) Shelley: Selections (Golden Treasury Series).
- (3) Matthew Arnold: Selections (Golden Treasury Series).
- (4) Robert Browning: Selections.

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- (b) }
 (c) } As in the Ordinary Course.
 (d) }

(e) One of the following :—

- (1) Lockhart: Life of Scott (abridged).
- (2) Coleridge: Lectures on Shakespeare.
- (3) Lamb: Letters (Vol. I., in "Everyman" Series).
- (4) Kinglake: Eothen; and Jefferies: Wild Life in a Southern County.
- (5) Ruskin: Munera Pulveris and A Crown of Wild Olive.

N.B.—If either 4 or 5 is chosen it is expected that both books will be read.

3. The Outlines of English Syntax and Composition.

(2) History.

Provision is made for four alternative Ordinary Courses, and for the same number of Advanced Courses, the latter admitting of further variation within their limits. Each of the Advanced Courses corresponds to the Ordinary Course designated by the same number, in such a way that students taking the two courses may, if it is found desirable, work together up to a certain point.

For the examination on each Ordinary Course one paper will be set, and for the examination on each Advanced Course two papers.

The Advanced Courses marked * are intended to include the study of certain works of English Literature. Students taking these Courses will not be required to take the examination in English Literature, though they will be required in all cases to write an essay.

Ordinary Courses.

1.

The History and working of the chief political institutions in the government of the British Isles, including the Local Government of England and Wales.

2.

Mediæval England from the death of Edward the Confessor to 1485.

The paper will not be confined to Political History but will include questions on Social Life and Customs, and an opportunity will be given to candidates to show knowledge of Architectural and Local History.

3.

The History of England from the accession of Elizabeth to the Restoration.

4.

The History of England from the middle of the 18th Century, with special reference to (a) Colonial History and (b) Industrial History. Students will not be required to give equal attention to the two portions of the paper.

Advanced Courses.

1.

The History and working of the chief political institutions in the government of the British Isles, including the Local Government of England and Wales.

A wider knowledge of the History of the Constitution will be required than for the Ordinary Course. Students will be expected to show some

acquaintance with the discussion of the simpler principles of constitutional government dealt with not only in the more elementary books such as Bagehot's "English Constitution," but also in such books as Mill's "Essay on Representative Government," and Dicey's "Law of the Constitution."

2.

Mediaeval England from the death of Edward the Confessor to 1485.

Two papers will be set :—

- (i) A general paper similar to that set to students taking Course 2 (Ordinary);
- (ii) A paper on one of the following :—
 - (a) The Crusades.

Students will be expected to read a translation of Joinville's "Chronicles of Louis IX."

- (b) The Social and Economic Condition of England from the middle of the 14th to the end of the 15th Century.

Students will be expected to read the Prologue to the Canterbury Tales and Froissart's account of the Campaigns of Crécy and Poitiers and the Reign of Richard II., and to show some knowledge of some of the contemporary literature, *e.g.*, of Piers Plowman and of the Paston Letters.

3.

Two papers will be set, dealing with one of the three following alternatives :—

- (a) The Era of the Protestant Revolution from the Revival of Learning to the end of the Council of Trent. In addition to the History of the Reformation in England students will be expected to show a general knowledge of the main course of events in Western Europe, and questions will also be set on the Life of Erasmus with special reference to Froude's "Life and Letters of Erasmus" and the Life of Sir Thomas More, with the Utopia.
- * (b) The Age of Elizabeth, including exploration and discovery during the 16th Century, the general outlines of European history during this period, and some knowledge of Elizabethan Literature down to the death of Shakespeare.
- * (c) The Puritan Revolution from the Accession of Charles I. to the Restoration. Students will be expected to show an acquaintance with some of the contemporary literature, *e.g.*, the shorter poems of Milton, the most important lyrical writers, selections from Clarendon's "Great Rebellion," the Letters and Speeches of Oliver Cromwell.

4.

The papers set in this course will be *either*—

- (a) Two papers on the History of Western Europe (including that of England) from 1740 to the establishment of the German Empire in 1871; *or*
- (b) Two papers on—
 - (i) The French Revolution down to the establishment of the Directory.
 - (ii) Europe during the Revolutionary and Napoleonic period with special reference to the struggle between France and England; *or*
- * (c) Two papers on the same Syllabus as that for students taking Ordinary Course 4, but requiring a fuller knowledge of the subject. Students will be expected to show an acquaintance with some of the imaginative literature of the 19th Century as illustrating the social history of the times.

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(3) Geography.

Provision is made for two alternative Ordinary Courses, and for the same number of Advanced Courses. Each of the Advanced Courses corresponds to the Ordinary Course designated by the same number, in such a way that students taking the two courses may, if it is found desirable, work together up to a certain point.

Ordinary Courses.

1.

This Course is intended to afford scope for a thorough training in Geographical principles involving the connection of physical with historical, political and economic Geography. It comprises:—

- (a) Mathematical and Astronomical Geography, including the interpretation and drawing of maps and charts, and an elementary knowledge of map-projection.
- (b) Physical Geography; general distribution of land and water; principal factors determining climate; general distribution of winds, temperature, rainfall, tides and currents; common materials forming the Earth's crust and their arrangement; rock structures; various types of land-relief; coast line and river features; lake systems; the distribution and effects of volcanoes; earthquakes.

- (c) Characteristics and distribution of the following vegetation zones—tundras, coniferous forests, deciduous forests, prairies, grass and steppe lands, deserts, tropical forests.

Distribution of plants, animals, and man in relation to these natural regions. Areas of dense and scanty population as determined by land-configuration, climate, geographical position and productions.

A knowledge of the world as a whole will be expected, and especially of such leading types of natural regions as Western Europe, the Mediterranean Lands, the Asiatic Monsoon Region, the South Eastern States of America, Eastern Canada and the North Eastern States, the Congo or Amazon Region, the Soudan.

- (d) Geography of the British Isles.

Physical Conditions.

General knowledge of the structure of the United Kingdom.

Influence of rock-structure on topography.

Distribution of land-forms; mountains, plateaux, escarpments, and plains. River systems in relation to topography.

General distribution of soils as determined by structure and topography.

Distribution of temperature and rainfall over the United Kingdom, including a knowledge of the rainfall map and isothermal lines.

Distribution of mineral wealth; coal, iron, tin, copper, and other minerals; building stones and materials.

Economic Geography.

Distribution of agricultural products and industries as determined by physical conditions, especially cereal, fruit, and pasture areas; textile industries; mining industries; iron and ship-building centres.

Distribution of population. Distribution of towns and their geographical significance.

Arteries of commerce, natural and artificial.

Great importance is attached to the study of the home district as an aid to the understanding of geographical problems.

2.

This Course is designed for those Colleges which prefer to lay stress on the historical side of Geography. It should only be taken by students who have already acquired a sound knowledge of geographical principles. It comprises—

- (a) A general knowledge of the physical geography of England and Wales, the configuration of the country, the coast line and the surrounding seas, the mineral wealth and the nature of the surface (soil and rock), based on an elementary knowledge of the geological structure.
- (b) The history of human settlements in England and Wales, including—
 - (a) A knowledge of the original surface of the country, distribution of forest and bog;
 - (b) The earliest inhabitants, the Roman occupation, the English, Norse, and Danish Invasions, the struggle with the Britons, and the extent and nature of the settlements;
 - (c) The origin of towns and villages, and of the areas of government, county, parish, &c.
- (c) History and present conditions of industry and commerce, treated chiefly from the geographic point of view, with the effect on the distribution of population, the growth of towns and centres of population.

Advanced Courses.

1.

Students taking this Course are assumed to possess a sound knowledge of geographical principles and be in a position to apply them to special areas.

The student should select for study a particular area, which may be any one of the following:—(a) Europe, including the British Isles; (b) the Mediterranean lands; (c) the Monsoon Lands of Asia; (d) North America; (e) two of the three Southern continents.

In connection with the area chosen a specialised study will be expected of its physical features (including an elementary knowledge of the principles of stratigraphical and physiographical geology), its climatic phenomena, its commercial and its human aspects.

2.

This course is the same as Course 2 (Ordinary), except that it is extended to include the whole of the British Isles.

(4) Mathematics.

N.B.—Two papers will be set both in the Ordinary and in the Advanced Course. When questions involving graphical methods are included in the papers, squared paper will be provided. Candidates will, when necessary, be supplied with trigonometrical and logarithmic tables.

Ordinary Course.

A.—ARITHMETIC AND ALGEBRA.

Arithmetic, excluding Troy Weight, Apothecaries' Weight, True Discount, Cube Root, Foreign Exchange, and Scales of Notation. Questions on Stocks will not involve a knowledge of "Brokerage." Candidates must be acquainted with the principles of the Metric system. Algebraical symbols and processes will be generally permitted.

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Algebra as far as, and including, simple equations of one unknown, quadratic equations of one unknown, simple simultaneous equations of two unknowns, easy simultaneous equations involving the squares of the unknowns, and problems leading up to these equations. Arithmetical progressions; geometrical progressions to a finite number of terms; square root, highest common factors and lowest common multiples, ratio and proportion. The use of logarithmic tables.

B.—GEOMETRY.

Every candidate must be provided with a ruler graduated in inches and tenths of an inch, and in centimetres and millimetres, a small set square, a protractor, compasses furnished with a hard pencil point, and a hard pencil.

Figures should be drawn accurately with a hard pencil.

Questions may be set in which the use of the set square or of the protractor is forbidden.

Any proof of a proposition will be accepted which appears to the Examiners to form part of a logical order of treatment of the subject. In the proof of theorems and deductions from them, the use of hypothetical constructions is permitted.

PRACTICAL GEOMETRY:—

The following constructions and easy extensions of them:—
Bisection of angles and of straight lines. Construction of perpendiculars to straight lines. Simple cases of construction from sufficient data of triangles and of quadrilaterals. Construction of parallels to a given straight line. Construction of angles equal to a given angle. Division of straight lines into a given number of equal parts.

Construction of a triangle equal in area to a given polygon. Construction of tangents to a circle. Construction of common tangents to two circles. Construction of circumscribed, inscribed, and escribed circles of a triangle. Construction of a segment of a circle containing an angle of given magnitude. Division of straight lines into parts in any given proportion. Construction of a fourth proportional to three given straight lines, and of a mean proportional to two given straight lines. Division of straight lines in extreme and mean ratio. Division of a straight line internally or externally into segments, so that the rectangle under the parts is equal to a given square. Construction of regular polygons in and about circles. Construction of a circle from sufficient data of the following character:—

(1) radius given, (2) point on the circle given, (3) contact with a given straight line or circle, (4) contact with a given straight line at a given point. Construction of a rectilinear figure to a specific scale or of specified area, and similar to a given figure. Construction of a square equal in area to a given polygon. (In cases where the validity of a construction is not obvious, candidates may be required to indicate the reasoning by which it is justified.)

Illustration and explanation by means of rectangular figures of the following identities:—

$$\begin{aligned} k(a + b + c + \dots) &= ka + kb + kc + \dots \\ (a + b)^2 &= a^2 + 2ab + b^2 \\ (a - b)^2 &= a^2 - 2ab + b^2 \\ a^2 - b^2 &= (a + b)(a - b). \end{aligned}$$

THEORETICAL GEOMETRY:—

Candidates should be acquainted with the fundamental propositions concerning angles, parallel straight lines, and the congruence of triangles, such as are contained in the substance of Euclid, Book I., Propositions 4—6, 8, 13—16, 18, 19, 26—30, 32. Easy deductions from these theorems will be set, and arithmetical illustrations will be included.

The substance of the theorems contained in Euclid, Book I., Propositions 33—41, 43, 47, 48; and Book III., Propositions 3, 14—16, 18—22, 31, 32, 35—37; Book VI., Propositions 1—8, 19, 20, 33, together with Propositions A and D. Questions upon these theorems, easy deductions from them, and arithmetical illustrations will be included. In dealing with proportion it may be assumed that all magnitudes of the same kind can be treated as commensurable.

Definitions of the trigonometrical ratios; the solution of right-angled triangles; easy problems on heights and distances.

Candidates will be expected to be acquainted with the forms of the cube, the rectangular block, the tetrahedron, the sphere, the cylinder, the wedge, the pyramid, and the cone.

Advanced Course.

Training Colleges which provide an Advanced Course in Mathematics are not required or advised to undertake the whole of the following Syllabus. Some will prefer one branch and some another. Students will benefit more from a portion thoroughly understood than from a superficial knowledge of the whole. Consequently they will not be expected to answer all the questions in the paper, but at the same time they will not be in any way restricted in their choice.

ALGEBRA.

As far as and including the Binomial Theorem for a positive Integral Index, Logarithms, and their use, Probabilities.

GEOMETRY.

Principles of Geometry applied to lines, circles, and the simpler solid bodies.

Principles of co-ordinate Geometry applied to lines and circles.

TRIGONOMETRY.

Measurement of angles.

Trigonometrical Ratios and the relations between them.

Expansion of Trigonometrical Ratios of compound angles. Relation between products and sums or differences of ratios.

Relation between sides and angles of a triangle. Expression of lines related to the triangle in terms of the sides and angles.

Application of logarithms to trigonometry.

MECHANICS.

Principle of the composition and resolution of forces, with simple applications.

Moments and couples. Equilibrium.

Centre of mass, in simple cases.

Simple machines. Friction. Virtual work.

Velocity and acceleration. Graphic methods applied to mechanics.

Pendulums, projectiles. Motion under gravity. Laws of motion. Motion in a circle. Impulsive forces. Impacts. Work and Energy. Harmonic motion.

(5) Elementary Science.

No scheme is prescribed by the Board. After a careful consideration of the needs of the students and of the facilities which the College offers for science teaching the authorities of the College should draw up a scheme and submit it for the approval of the Board.

Students who have not gone through a course of instruction in Practical Science before entering the Training College should, as a rule, take a course

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in Elementary Physics and Chemistry. A Syllabus of such a course is appended below, but Colleges are at liberty to submit alternative Syllabuses. Nature Study may be taken either in addition to such a course or in place of part of it.

Students who have, before entering the Training College, gone through an Elementary Course in Physics and Chemistry covering most of the ground included in the Syllabus given below are advised either to take up Nature Study (including Plant Physiology) as their work for the Ordinary Course, or to take one of the Advanced Courses in Physics, Chemistry, Botany, or Rural Science. Syllabuses of the Advanced Courses in these subjects are given on pages 84 to 88. No Syllabus is suggested for Nature Study, as the conditions under which this work can best be taken vary greatly in different Colleges. Students who take an Advanced Course in Rural Science are recommended to take a course in General Experimental Science in accordance with the Syllabus given on page 89.

The instruction in Elementary Science will in the main be tested by inspection. Students will be expected to be able to carry out experiments selected from that portion of the approved syllabus which has been worked through up to the date of the Inspector's visit, or to perform such experiments of similar character as the Inspector may consider suitable. The Science note-books of every student must be available for the Inspector's investigation. These note-books should show clearly the experiments performed by each student and the order in which the experiments were performed. The Inspector is instructed to base the report which he may make not only on the experiments which he sees performed on the occasion of his visit and on the oral answers to any questions he may put to the students during his inspection, but also on the evidence afforded by these note-books that the practical work of all the students has been systematic and properly supervised. Should the Inspector find that even with the assistance of the note-books and of observation of the practical work he is unable to form an adequate opinion of the Science work of the College as a whole or of the work of any of the students in particular, he will himself set a short paper of questions to be worked by the students concerned. The questions which he will set will relate to that portion of the approved syllabus covered before the date of his visit.

ELEMENTARY COURSE IN PHYSICS AND CHEMISTRY.

PART I.

Lengths; areas; volumes; weights; British and metric systems; simple lever; balance; density of solids and liquids; Principle of Archimedes; specific gravity; flotation, hydrometer, and lactometer; U tube; barometer.

Measurement of expansion by heat of solids, liquids, and gases. Convection currents in both liquids and gases. Applications to hot water circulation systems, and ventilation. Thermometers. Experiments on melting and solidifying points, or boiling points and on evaporation and condensation with the following substances; paraffin wax, butter, margarine, water, salt solution, methylated spirits; and with fat and olive oil in connection with cooking.

Measurement of heat; specific and latent heats, treated very simply.

Study of the effect of heat and acids on such common substances as chalk, washing soda, bicarbonate of soda, iron, copper, lead, the burning of starch, sugar, animal and vegetable matters; the rusting of iron, and the burning of phosphorus and magnesium. These experiments should lead to a knowledge of the composition of chalk, air, and water, and should have shown that carbon, iron, copper, &c., unite with oxygen to form oxides, and that food stuffs, such as starch and sugar, contain both carbon and hydrogen.

Solubility of solids and liquids in hot and cold water, in alcohol, benzine, and other solvents, *e.g.*, salt, sugar, starch, oils, grease, resin, &c.

Hard and soft waters; soap solution; natural waters; impurities in water.

Experiments to find the amount of water contained in such substances as milk, vegetables, meat, soap.

Many of the above changes should be studied quantitatively, *e.g.*, the increase or decrease in weight; the volume of gas evolved from known weights of substances.

PART II.

Boyle's Law. Measurement of force; spring balance or dynamometer; parallel forces; centre of gravity; parallelogram and triangle of forces; inclined plane; simple pendulum.

Transference of heat; quantity of heat; specific and latent heats; dew point.

Propagation of light; shadows; photometry; laws of reflection and refraction, with reference to plane and spherical surfaces; prism and spectrum.

Properties of magnets; magnetic induction; magnetic lines of force; use of magnetometer; Earth as a magnet; dip and declination.

Development of electricity by various means; electroscope, Leyden jar; effects of electric current; electro-magnets; electro-magnetic induction; the tangent galvanometer.

PART III.

Boyle's Law. Further study of chemical change.

The following reactions should be studied and a knowledge of the products will be expected:—

Action of strong sulphuric acid on salt and nitre.

Action of hydrochloric acid on red lead and manganese dioxide.

Action of strong sulphuric acid on copper

Study of the formation of salts. Preparation properties and composition of ammonia. Properties of caustic soda and potash. Alkalis and acids contrasted. Quantitative experiments in neutralisation. Acids, bases and salts. Solution, solubility curves.

Simple practical study of oil, fat, albumen, starch and sugar.

(6) Welsh.

(For Welsh Colleges only.)

The aim of the following courses of study is to lead the students towards an appreciation of the best that has been written in the Welsh Language, and to give them a command of good literary Welsh. The books recommended below should therefore be studied from the literary and stylistic rather than from the historical and philological point of view.

An essay will be set in the examination on both courses.

Ordinary Course.

1. For detailed study.

Y Mabinogion: Y Pedair Cainc (modernised version).

2. For general reading.

Dafydd ap Gwilym: Cywydd Gyrru'r Haf i Forgannwg.

Ceirïog: Oriau'r Bore.

Winnie Parry: Cerrig y Rhyd.

An Anthology of Prose: (Clasuron Rhyddiaith Cymru is recommended, or any Anthology approved by the Board).

3. Translation of unseen passages from Welsh and English Authors.

4. Outlines of Welsh Grammar.

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Advanced Course.

1. For detailed study.

The books prescribed for the Ordinary Course, with the addition of the following :—

Bardd Cwsc : Gweledigaeth Cwrs y Byd and Gweledigaeth Angen.

2. For general reading.

The books prescribed for the Ordinary Course, with the addition of the following :—

Drych y Prif Oesoedd : Part I.

Goronwy Owen : Cywydd y Farn.

Eben Fardd : Dinystr Jerusalem.

Islwyn : Cymru.

D. Owen : Rhys Lewis.

Richard Morgan : Tro trwy'r Wig.

An Anthology of Verse (Caniadau Cymru is recommended).

3. Translation of unseen passages from Welsh and English Authors.

4. An outline course on the structure and idiom of the Welsh Language.

B. PROFESSIONAL SUBJECTS.

(7) Principles of Teaching.

Ordinary Course.

The syllabus is divided into two parts:—

Part I. contains one section (A) which will be obligatory upon all students, and also three other sections (B), (C) and (D), one only of which may be offered for examination. The paper on Part I. of the syllabus will occupy three hours.

Part II. contains two alternative sections. Section A is general in character. Section B is designed to meet the needs of students who expect to teach in Infants' Schools or in the lower classes of schools for older scholars, and whom it is proposed to train especially for such classes. The paper on Part II. of the syllabus will occupy two hours and a half.

PART I.

A.—(i) The school buildings and their relation to teaching and to physical training; use of halls and playgrounds; sanitary conditions, and supervision.

Types of schools, *e.g.*, the small and the large school, the mixed and the departmental school, the rural and the urban school, various kinds of urban schools, &c.; forms of organisation appropriate to each type. Allocation of work and distribution of staff.

Classification of scholars; the "standard" system and its alternatives; the problems of promotion; the place of the transition class.

Methods of testing progress in various subjects at different stages; school records.

(ii) Subjects of the curriculum and reasons for their inclusion; their relative importance at different periods of school life; possibility of connecting subjects with one another; variation in curriculum to meet the needs of various types of schools and of scholars at different ages; transition from lower to higher departments of the same school.

Methods of teaching in general; the characteristics of the collective lesson; possibility of individual teaching and of teaching classes in sections; the place of exposition and of catechetical teaching; framing questions and dealing with answers; method of dealing with mistakes (oral and written); illustrations; relation between the scholars' own work and that of the teacher; methods of encouraging private study and self help by scholars; differences in methods as applied to children at various stages, *e.g.*, younger and older infants, junior and senior classes; special problems connected with the oldest scholars.

Preparation of schemes of work; series of lessons and single lessons; full notes and working notes; various uses and methods of revision.

The arrangement of time-tables; variations to meet special needs; balance of subjects; work in the open air.

(iii) Discipline and self-discipline; treatment of younger scholars; training of older scholars in responsibility; opportunities for training character; methods of dealing with school offences.

Cultivation of corporate life; influence of games.

(iv) Health and physique of children as affecting their school education; direct and indirect means of cultivating good physical habits in school, *e.g.*, attitudes in writing and oral lessons, personal cleanliness, rest, &c.; mental and physical fatigue in relation to lessons and games.

(v) The function and ideals of the public elementary school; the influence of the school on the home and on the after life of the scholars; their training for leisure and for citizenship. The place of the public elementary school in a national system of education.

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B.—(i) Successive stages of physical and mental growth during childhood, their chief characteristics and the dangers to which each is exposed.

(ii) An outline study of the growth of character during childhood, based as far as possible upon observation of children :—

Habits and their formation; influence of imitation and suggestion, of praise and blame, of rewards and punishments; methods of dealing with children of a special type (*e.g.*, nervousness, wilfulness, temper, apathy); questions of discipline in connection with the above more thoroughly considered.

Means and opportunities for cultivating in school life such qualities as obedience, self-control, self-reliance, a sense of honour, reverence, the social virtues.

(iii) The processes of acquiring and using knowledge simply considered :—

The development, training, and care of the special senses; different modes of expression, especially speech; retentiveness as the basis of memory, different types of memory and their use; interest and attention in their relation to each other; the growth of imagination, its exercise and cultivation; importance of clear and connected ideas; reasoning and school opportunities for developing it; the building up of definite and systematic knowledge.

Differences of mental equipment in children; the problem of the backward child.

C. An outline of the history of elementary education in England and Wales from 1800 to the present day.

The influence of the great social and philanthropic movements of the 19th century upon elementary education. The growth of State action, legislative and administrative, in relation to elementary schools. The development of the system of providing and training teachers and the types of school organisation which arose at various stages. The broadening of the curriculum and the development of methods of teaching, with special reference to the influence of leaders of educational thought. The present position of the Elementary School in relation to national needs.

D. The development of Infants' Schools at home and abroad.

PART II.

Sections A and B are alternative.

A. Methods and principles of teaching the following :—

Language; means of securing clear articulation and accurate hearing; use of stories; continuous speech and written composition; reading aloud, silent reading; training in the use of books; place of grammar; cultivation through poetry and prose of a taste for literature.

Number and elementary mathematics; methods and apparatus; practical instruction and its relation to handwork; use of literal symbols and graphs by older children; mensuration and geometrical drawing.

Manual occupations, including drawing and writing; their educational value and right use in connection with other subjects; methods and materials at various stages.

Observation lessons and Nature Study; place of investigation and of information; indoor and outdoor work; selection of material appropriate for schools differently situated; connection with gardening.

Geography; association with Nature Study; descriptive geography and stories; cause and effect in geography; use and construction of maps; school journeys.

History; national traditions and social life; citizenship. Singing; voice training; sight-singing; choice of songs.

Hygiene and physical training; breathing exercises; instruction in laws of health; games and physical exercises.
Needlework and knitting.

B. Methods of instruction and training suitable to Infants and Junior

Classes:—

Language and literature; means of securing clear articulation and accurate hearing; place of stories, poetry, and song; story and verse material available; principles governing choice of material and mode of presentation; possibilities of speech training to children in small groups; continuous speech and oral composition.

Beginnings of reading and writing; place of word-building and spelling; reading material for young children.

Preparation for history and descriptive geography.

Number; incidental and direct teaching; beginnings of formal instruction in arithmetic; place of oral and written work.

Nature Study; choice of material for town and country children; the observation lesson; connection of nature study with expression lessons; lessons on natural phenomena leading up to geography.

Handwork; types of handwork and their value; free occupations; use in connection with other subjects as expression lessons; work with chalk, crayon, brush and pencil, with clay, paper, &c.; drawing as a means of training observation and as a means of self-expression; handwork suitable to children above the "Infant" stage, including introductory exercises in knitting and sewing.

Play; games in the schoolroom and outside; the "kindergarten" game; traditional games; place of dramatisation.

Special methods of teaching children under five; the "Infant" stage; the instruction of children in classes above the "Infant" stage; problems connected with transition classes.

Schemes of work; the story, the nature lesson and the occupation as the basis of a scheme; the possibilities and limits of correlation.

Study of the mind of the child; examination of the means of preserving the spontaneity of the child and of directing its instincts; special types of younger children.

Advanced Course.

The Syllabus is divided into three parts:—

Part I. is Part I. of the Syllabus for the Ordinary Course, with more thorough treatment of one of the following sections of it:—

Either Part I. A. (ii);

or Part I. B. (iii).

Part II. is Part II. of the Ordinary Course.

Part III. is to be taken in addition to the Ordinary Course. The paper on it will occupy an hour and a half.

PART III.

Part III. will consist of one of the three alternatives, (A), (B), and (C), set out below.

(A) The study of one of the following books:—

- (1) Plato's Republic, Books II. to IV. in any translation.
- (2) Herbert Spencer's Education.
- (3) Froebel's Autobiography and Education of Man (Hailmann's translation). Chapters 1 to 4, together with sections 86 to 92 and 94 to 98 of Chapter 6.
- (4) Comenius' School of Infancy, together with Pestalozzi's How Gertrude teaches her Children (any English translation).

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(B) The more detailed study of the method of teaching one of the following subjects :—

1. English.
2. Arithmetic and Practical Mathematics.
3. Geography.
4. Nature Study and Elementary Science.
5. History.
6. Handwork.
7. Housecraft and Advanced Needlework.
8. The teaching of Language in a bilingual population.

(C) A fuller treatment of the principles and methods of training young children, with special reference to the mother tongue, play and games, music, and handwork. Students will be expected to show acquaintance with the best children's literature, music and games.

Advanced Course (for Third Year Students).

The course of training of students who are taking a third year of training at a recognised Training College in England or Wales must make provision for the study of Education on the following lines, unless the student is taking Education as part of a course for a Degree.

(1) The student will be required (a) to make a special study of a selected book, and (b) to make a more detailed study of the method of teaching one of the subjects ordinarily taught in a Public Elementary School. The selected book and the subject chosen for more detailed study must be taken from the list given in the Syllabus for the Advanced Course above.

In place of (b) students may, if they choose, take a fuller treatment of the principles and methods of training young children, as set out under head (C) of Part III of the Advanced Course above.

Students who have already taken an Advanced Course in the Principles of Teaching must submit in their third year a book or subject different from that previously studied.

The Board will conduct an examination on this part of the Third Year Course.

(2) The Third Year Student should also undertake some piece of educational study, to be suggested by the Training College Authorities for the approval of the Board. The College Authorities should examine the student on this work either by means of an examination paper or by means of a thesis or essay, and should submit to the Board evidence to show that the work has been properly done. The following are types of study which are suggested as suitable for this purpose, but the Board do not prescribe any one of them:—

- (a) The Open Air School.
- (b) Curriculum and teaching in classes for older children.
- (c) Contrast in curriculum between Schools in rural and Schools in urban areas.
- (d) The treatment of children who are backward but not defective.

Special Courses.

These courses are intended only for students who are being trained with a view to work in Special Elementary Schools under the provisions of Chapter VII. of the Regulations. No student may take more than one of these courses. Such a course may be taken either (a) in substitution for the Ordinary Course in the Principles of Teaching by a Two Year Student, or (b) as part of the work for a third year by a student who has completed a Two Years' Course.

1.

SPECIAL COURSE FOR TEACHERS OF BLIND CHILDREN.

1. *Physiology.*

The syllabus of instruction in Hygiene should be modified and amplified so far as may be necessary.

2. *Psychology.*

Educational limitations imposed by total or partial blindness.
 Cutaneous and muscular senses the main avenues of observation.
 Preservation of the tactile sense.
 Speech in the training of the blind.
 The part played by Physical Training, Music, Manual Work, and Literature in the training of the blind.
 The aim of blind education to secure independence in movement, industrial aptitude and refinement.

3. *Special Subjects.*

Braille Reading and Writing as used in schools (excluding Grade III.).

The teaching of Practical Number and Arithmetic to the blind.

The teaching of Geography to the blind.

Physical Training for the blind. Gait. Attitude.

Manual occupations suited to blind children of various ages (*either Kindergarten or Senior occupations to be offered by each student*).

The training of blind children in personal habits.

2.

SPECIAL COURSE FOR TEACHERS OF DEAF CHILDREN.

1. *Physiology.*

The syllabus of instruction in Hygiene should be modified and amplified so far as may be necessary.

2. *Psychology.*

The limitations to intelligent verbal expression imposed by loss of hearing.

The limitation of the totally deaf, the congenitally deaf, the partially deaf, the semi-deaf, the semi-mute, and the hard of hearing.

Language for the deaf. Modes of communication. Speech, lip-reading, writing, and finger spelling.

3. *Special Subjects.*

The oral method. The development of speech among the deaf.

Language. The development of terms, actions, ideas. Verbal inflection. The teaching of Reading to the deaf. Conjunctions.

Subject matter for language teaching.

Practical Number and Arithmetic for the deaf.

Manual occupations (*either Kindergarten or Senior occupations to be offered by each student*).

Physical training of the deaf. Gait. Attitude.

3.

SPECIAL COURSE FOR TEACHERS OF MENTALLY DEFECTIVE CHILDREN.

1. *Physiology.*

The syllabus of instruction in Hygiene should be modified and amplified so far as may be necessary.

2. *Psychology.*

The mental signs of deficiency; disturbances of ethical and reasoning power, memory, response, volition, and volitional balance; nerve flabbiness.

Disturbances of excess or defect in the lower faculties.

Spurious mental defect due to depressing physical conditions.

The effect of training on mental deficiency, real and spurious.

3. *Special Subjects.*

Speech training. Types of speech defect and how to deal with them.

The division of subjects of instruction into small steps adapted to defectives.

Physical training adapted to defectives.

Manual occupations (*either Kindergarten or Senior occupations to be offered by each student*).

Training in personal habits.

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(8) The Practice of Teaching.

The practical training of students may be given only in schools approved for that purpose by the Board, and the responsibility for the conduct of the practice will rest with the officers of the Training College. It should be so organised that the number assigned for supervision to one officer, at one time, should never exceed ten; and the officers employed should, as a rule, be present in the schools so used during the whole time of the practice of the students for whom they are responsible.

The greater part of the practice should be continuous, and no period less than a meeting of a school can be counted as effective practice.

All students, whether tested in teaching by H.M. Inspector or not, must be prepared to submit their own records of practical work for his examination, and the College records and notes on individual students must in the same way be submitted to him when he visits the College. It is expected that systematic provision will be made for enabling students to see work being done by teachers of special competence and experience, who will explain the procedure followed and discuss it with the students. The teachers of special subjects in Training Colleges should, as a rule, be qualified to take an active part in this kind of work, and should share in the conduct of technical exercises. "Criticism" or "Open" Lessons should, as a rule, be conducted with small groups of students, but opportunity should be found for some such exercises, to be seen by the greater part of the staff together, in order to secure agreement as to aim and procedure.

Students should be exempted during the period of school practice from all ordinary lectures and work in order to avoid undue pressure, and in order that they may concentrate their full attention upon this most important part of their training.

In the case of students who are taking a Special Course in the Principles of Teaching, the practical work should be arranged as far as possible with reference to that course.

(9) Hygiene.

The following Syllabus is intended to serve as a model for general guidance, but alternative Syllabuses may be submitted to the Board for approval, provided they are not less comprehensive than this. The Board's Final Examination for Students in Training Colleges will include a paper in Hygiene containing questions based on this syllabus, a certain number of alternative questions being allowed to meet the case of Colleges for which alternative Syllabuses may have been approved.

The sole object of the Syllabus is to develop in the student an intelligent appreciation of the theory and practice of Hygiene. The Course is intended to familiarise him with the general principles of Hygiene with a view to their practical application by him, when he has become a teacher, in the educational and personal interests of the children who come under his care in the Public Elementary Schools. It is not in any way whatever meant to be a Syllabus upon which instruction is to be given to children and no attempt must be made to use it in that way. The purpose kept in view in the Syllabus has been to give the student a good general survey of the subject as a whole. To secure this object it is necessary that a wide ground should be covered, but too much time should not be devoted to any one part of the subject. Some class work including practical demonstrations should also be undertaken, and full opportunity should be given for the Students to question the lecturer. It is desirable that the College teacher in this subject should avoid technical and medical terms, and should confine himself to teaching the elements of Hygiene in a simple and practical manner. The aim of the Course should be to give the students a broad and comprehensive understanding of the main principles and their application to the health of the school child.

The Syllabus is drawn up on the assumption that the students taking the course will, as a rule, have gone through a course of practical instruction.

tion in Elementary Science before entering the Training College. In teaching students who have not had any previous training in Science, it will probably be found necessary to devote some additional lessons to explaining certain points which might otherwise have been taken for granted.

No special Advanced Course is laid down in the subject of Hygiene, but a mark of distinction may be awarded to a student taking the Ordinary Course in Hygiene and Physical Training who shows a thorough knowledge of Hygiene and reaches a high standard of work in Physical Training.

SECTION I.—INTRODUCTORY.

The place of man in the animal kingdom.

The cell as unit of tissues and organs of the body.

Structure and function, work and rest. Division of labour.

The child a developing and immature human being. Factors (other than hereditary and antenatal conditions) influencing its development: (a) environment; (b) nutrition and training (particularly of brain and nervous system during plastic period of growth).

The common characteristics of children in health.

SECTION II.—THE SKELETON AND MUSCULAR SYSTEM.

The Skeleton and its development in the young. Joints. Locomotion.

Importance of attitudes and postures. Spinal curvature.

The muscular system and its relation to the nervous system.

*Physical exercises, dancing and games. Muscular fatigue.

SECTION III.—THE DIGESTIVE SYSTEM.

The alimentary canal and the process of digestion, commencing in mouth. Hygiene of mouth and teeth.

Amount and sorts of food for children, uses and values.

The dangers to which people are exposed by taking too much or too little food, tainted food, alcohol, &c.†

Signs of malnutrition. Rickets.

SECTION IV.—THE RESPIRATORY AND CIRCULATORY SYSTEMS.

The purpose of the circulation of the blood. Blood, heart and blood vessels. Anæmia. The lymphatic system.

The lungs. Purpose and mechanism of respiration. Breathing Exercises. Obstructions to breathing (adenoids, &c.).

Difference between fresh and expired air.

Relation of respiration and circulation to nervous system. The effects of exercise, tight clothing, &c.

Advantages of an open-air life.

SECTION V.—THE EXCRETORY SYSTEM.

Care of the body.

Importance of personal cleanliness, regular habits, nutrition, clothing.

Waste matter—waste matter as result of work, undigested food.

Excretory organs and how they work: skin, kidneys, lungs, &c.

SECTION VI.—THE NERVOUS SYSTEM.

Brain, spinal cord, motor and sensory nerves.

Reflex action. Brain centres and nerve cells. The way the brain works. Co-ordination and association.

Requirements of a healthy nervous system (nourishment, regular habits, physical exercises, manual and intellectual work, periods of rest and change

* For the teaching of Physical Exercises the Board's Official Syllabus should be followed.

† For instruction relating to alcohol the Board's syllabus of *Lessons on Temperance* should be followed.

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of occupation). Evil effects of malnutrition, overstrain, impure air, bad habits, alcohol, &c. Mental dulness, feeble-mindedness, headaches, neuralgia; how to detect and deal with them in school.

Development of child's nervous system (sensory receptivity, reflex movement, imitation, attention, self-control; nourishment and education of nerve cells). Development of motor centres by muscular exercise.

Physical and mental fatigue.

SECTION VII.—SENSE ORGANS.

Relation of senses to nervous system.

Their training and development.

Sense of Sight.—Structure of the eye. Eye muscles: mechanism of accommodation. Eye strain, particularly in young children.

Defects of vision and common eye diseases, such as a Teacher may notice.

Short and long sight, &c. Vision testing.

Effect on sight of bad light, long hours, small print, close work, &c., especially in childhood.

SECTION VIII.—SENSE ORGANS (*continued*).

Hearing.—Structure of ear. Causes and signs of defective hearing. Tests. How the Teacher can train the sense of hearing.

Speech.—The structure and use of vocal organs. How to deal with defective articulation, and train the speaking voice in school. Speech defects.

Sense of Smell.

Sense of Touch.—Co-ordination, temperature, feeling, muscular sense.

SECTION IX.—SANITATION OF THE SCHOOL.

Requirements of the healthy school:—

Suitability of site, soil, and construction (various types of school buildings).

Water Supply.—Collection, storage, and distribution. Various forms of pollution. Methods of prevention.

Sanitary conveniences (various types), drainage, refuse removal. Earth closets and their management.

Effects of sewer gas.

SECTION X.—SANITATION OF THE SCHOOL (*continued*).

Ventilation—cubic capacity, amount of fresh air necessary. Impurities of atmosphere and their effects. Methods of ventilation.

Warming and lighting.

Equipment.—(Class-rooms, desks, blackboards, cloakrooms, lavatories, &c.) The Hygiene of Infant Departments.

Cleanliness.—Class-room as an object lesson in health.

Duties of individual in relation to health of community.

SECTION XI.—DISABILITIES AND DISEASES OF CHILDREN.

The relation of micro-organisms to disease. Conditions of their life. Relation of seed (bacteria) and soil (body tissues). Means of resistance.

Chief characteristics of ailing children. Conditions disposing to disease.

Early signs and symptoms of ill-health in children (nervous conditions, infectious diseases, parasites).

SECTION XII.—MEDICAL INSPECTION OF SCHOOLS, &c.

The objects and method of medical inspection of schools and school children.

Methods of detecting and dealing with physically and mentally defective children.

Direct and indirect means of cultivating good physical habits in school, and adapting education to the physical needs of the child. (Example and health of teacher, games, physical exercises, ventilation, cleanliness, absence of near-eye work.)

School closure and exclusion of children on medical grounds. First aid in minor injuries and common ailments.

Disinfection.

(10) Physical Training.

In the course of Physical Training attention should be given to the following subjects:—

- (i) *Practical Physical Exercises*, which should include all exercises, games, &c., of the Board's Syllabus of Physical Exercises for Public Elementary Schools, 1909. Simple apparatus work and more advanced exercises may be added if the conditions are suitable.
- (ii) *The Theory of Physical Exercises*, which should follow the lines laid down in the Board's Syllabus of Physical Exercises. The relation of Physical Training to Hygiene, and the practical application of theoretical principles to school life, should be dealt with in some detail.
- (iii) *Training in* (a) Commanding.
(b) Teaching fellow-students.
(c) Teaching a class of children.

(11) The Theory of Music.

Ordinary Course.

The Theoretical course in Music should include the following:—

- (a) The position of notes on the treble and bass clefs. All the major and minor scales and key signatures. Transposition. Transcription into the Sol-fa Notation and *vice versa*.
- (b) The value of notes, tied notes, dotted notes, and rests. Signatures of all simple and compound times. Accent and syncopation. Contents of bars. Transcription from one time to another.
- (c) A thorough knowledge of Sol-fa Notation in so far as it is of assistance in learning the Staff Notation. (Modulator, major and minor modes, names of chromatic tones. Removes of keys. Bridge notes and distinguishing tones. All the measures in common use.)
- (d) Musical terms in common use.
- (e) General rules relating to voice training—particularly with reference to the voices of children.
- (f) The principles governing the choice of school songs.

(12) Singing.

Ordinary Course.

The Practical course of training in Music should include the following:—

- (a) Choral singing.
- (b) Unison singing of classical songs.
- (c) Ear tests.
- (d) Sight reading from both notations.
- (e) Capacity to beat time to either instrumental or vocal performance.
- (f) Blackboard writing of tests.

The students may be examined individually in (d), (e), and (f).

N.B.—Students should also receive instruction in proper methods of breathing. This instruction would probably be included in the course of Physical Training.

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(11) and (12) Music.

Advanced Course.

The Advanced Course in Music will include the following, in addition to the work of the Ordinary Course in the Theory of Music and in Singing:—

- I. Advanced sight-reading in both notations.
- II. Advanced ear-tests and blackboard-writing.
- III. One of the following courses of practical work:—
 - (a) Singing: including two of Concone's Solfeggi, twenty songs from the National Song Book (published by Boosey & Co., 295, Regent Street, W.), and ten songs from the first two volumes of the Golden Treasury (also published by Boosey & Co.).
 - (b) Pianoforte: all major and harmonic minor scales, a study by Clementi or Czerny, a movement by Bach, and a movement from one of Beethoven's or Mozart's Sonatas.
 - (c) Organ: all major and harmonic minor scales, an easy fugue by Bach, and a piece chosen by the student.
 - (d) Violin: major and melodic minor scales of G, A \flat , A, B \flat , B, and C; a study chosen by the student, and a movement from one of Mozart's Sonatas.
- IV. Advanced Theory; including Laws of Part-writing, Triads, Cadences, Sequences, Inversions of the Triad, Passing-notes, Auxiliary Notes, Suspensions, Dominant Sevenths, Inversions of the Dominant Seventh, and the harmonisation in four parts of a melody (of about the difficulty of an ordinary hymn-tune).
- V. Form, as exemplified in the Beethoven Sonatas up to Op. 14, No. 2.

N.B.—Students will also be tested as to their ability to teach singing to a class of children.

(13) Reading and Recitation.

1. Students will be required to read aloud passages from the books prescribed for general and detailed study under the head of English.
2. Passages from standard English authors should be learned by heart. In Welsh Colleges some of the passages selected may be in Welsh.
3. The teaching of the subject should include such a knowledge of Elementary Practical Phonetics as will enable the students to analyse and classify the sounds of spoken English, and to explain the mechanism of their production in terms suitable for teaching children how to speak and read distinctly.

(14) Drawing.

Ordinary Course.

The course of study in Drawing should be directed to the acquisition of power to —

- (a) observe attentively, know accurately, and represent truthfully natural and artificial objects;
 - (b) use the blackboard for class teaching;
 - (c) draw from memory, knowledge, and imagination.
- (a) The chief aim should be the formation of habits of attentive observation, the acquisition of accurate knowledge of general form, organic and inorganic, and of the form and main characteristics of natural objects, and the power to express correctly the results of observation and knowledge.

(b) For class teaching, drawing on the blackboard should be rapidly and directly executed with a full appreciation and knowledge of the main characteristics of the subjects drawn, especially of their form and appearance; its chief aim and use in class is to enable the Teacher to help the children to see, to think, to form clear ideas, and acquire accurate knowledge in all subjects of the School Curriculum, and to express their ideas by drawing as well as by words.

(c) The Teacher must therefore cultivate the power of retaining and expressing visual impressions; he must acquire knowledge of the forms and characteristics of things, so as to be able to draw from memory and knowledge; and by constructive imagination to use this knowledge for instruction generally. The various subjects of the School Curriculum, *e.g.*, History, Geography, Nature Study, will furnish suitable material for practice under these sections.

In sections (a) and (c) the exercises should not be restricted to drawing in outline with only one medium. A wider range of study may be secured by the use of the following materials:—Charcoal, crayon, pencil, pen or brush on both white and toned papers. Coloured chalks may be used for Blackboard Drawing &c., but no mechanical means, such as ruling, measuring, or tracing are allowed. When the Inspector visits the College he will review the whole of the course of study in Drawing, and, so far as he finds desirable in each case, he will test the power of the students in Drawing on paper as well as upon the blackboard. The Authorities of the College should also take into account work on paper as well as upon the blackboard in preparing the lists of students grouped according to proficiency in Drawing under Articles 19 and 47 of the Regulations.

Advanced Course.

This Course is intended for students who have a special aptitude for Drawing, and who desire to reach a proficiency not obtainable by the Ordinary Course. It will include the work of the Ordinary Course, together with the following:—

- I.—(i) Drawing from Common Objects of large size, singly and in combination, studied in reference to suitable backgrounds.
- (ii) Drawing from natural objects such as plants, birds, animals, shells, &c.
- (iii) Drawing from objects specially illustrating, or recording observations in, other subjects of study, *e.g.*, scientific apparatus; outdoor sketches such as historic buildings or parts of them; nature study showing the life history of a frog or toad, a butterfly, moth, bee, or other insect, or the development of plants from seed, *e.g.*, pea, bean, oak; or from bulbs, *e.g.*, snowdrop, daffodil, hyacinth; or the development of leaves from buds, *e.g.*, horse chestnuts, beech, ash, &c.

The practice should include—

- (a) Complete representation in colour, using different mediums, such as water-colours, pastels, &c.
- (b) Drawing in light and shade in a simple manner without stippling or excessive finish.
- (c) Drawing in outline.

II.—Drawing from memory and imagination:—

- (i) Memory drawing of plants, animals, and other forms, especially those things which have evolved their form through long use in the service of man, such as scythe, reaping-hook, axe, hammer, barrel, drinking vessels, &c.
- (ii) Original designs useful as illustrations to English history or general literature.

Note.—The study of this branch is not for the purpose of showing pupils how to do such things, but to enable teachers to put themselves in sympathy with the efforts of their pupils in the graphic expression of ideas.

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Plain lettering of good form should be used for the titles and descriptions of each group of study.

III.—Students who are entered for this Course will also be examined in—

- (a) Drawing from artificial and natural objects.
- (b) Drawing from memory.
- (c) The principles of teaching Drawing.

For the Examination under (a) the Examiner may select one or more hand-made articles, or a natural object, or both, and the students will be required to make their drawings as complete as possible. Any medium may be used.

Under (b) the students will be expected to draw a plant or a common object or group of objects. The plant will be selected from the following:—Apple, blackberry, buttercup, daffodil, ivy, laurel, oak, primrose, poppy, wild rose, strawberry, tulip.

All the exercises done during the period of study by each student entered for this Course must be submitted to the Board on or before June 1st immediately preceding the termination of the student's College course; and the submitted exercises should be carefully classified according to the groups of study under which they fall.

Training Colleges may submit to the Board for approval schemes alternative to the above. These schemes should be submitted at the beginning of the students' Course, and will be approved by the Board if satisfactory.

(15) Handwork.

The instruction in Handwork referred to under this heading is not intended to constitute a separate subject of the Training College curriculum and will not be specially tested for the purposes of Articles 19 and 47. The syllabus is put forward in order to give general guidance for the widening of the character of the work hitherto done in Men's Colleges, and to show the lines on which the training already given in some Women's Colleges to those intending to be teachers of younger children may be most usefully developed. Much of the training in Handwork suggested in the syllabus would be introduced most naturally in connection with the instruction in the methods of teaching the several subjects of the curriculum and as an auxiliary to the instruction in drawing:—

- (1) Consideration of the place of Handwork in the curriculum of a school.
- (2) Correlation of Handwork with other subjects.
- (3) Operations suitable for the child at various stages of school life.
- (4) Study of suitable materials, and courses of work.

(16) Needlework (*for Women only*).

The needlework instruction of students should be specially directed towards the acquisition of skill in teaching needlework, collectively and by demonstration.

The practical work of the students should include—

- (i) Exercises in plain needlework, in the repairing of linen, cotton, and woollen materials, in the cutting-out of ordinary underclothing, in the putting together of garments, and in the use of the sewing machine.
- (ii) The knitting of socks, stockings, and other simple articles.

The practice of the students in teaching needlework to children will be inspected from time to time by the Board. Practical tests may also be set where it appears desirable, to all or some of the students towards the conclusion of their period of training.

Such tests, when applied, will consist of—

- (a) Exercises in cutting-out, making up and working a section of a garment, in mending of the actual garment, or other worn article (*e.g.*, house linen); or
- (b) A paper of questions, testing the candidate's theoretical knowledge of how to carry out various needlework exercises and of the methods to be followed in teaching the said exercises to classes of children.

In the case of Students intending to be Teachers of younger children, the College may submit a special syllabus substituting educational Handwork and simple Needlework for the ordinary Needlework course. The syllabus should include Handwork suitable for children up to about the age of nine. Students taking this syllabus will be tested both for practical work and for skill in teaching in the same way as students taking the ordinary Needlework syllabus.

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C. ADDITIONAL SUBJECTS.

(17) French.

No set books are prescribed for study. The passages for translation into English will be taken from French authors of established repute, both prose writers and poets. Candidates will be required to translate pieces of English prose of moderate difficulty into French, and exercises in free composition will also be included in the examination.

All candidates will be required to take a supplementary oral examination, at which they may be called upon to read aloud, to write from dictation, and generally to satisfy the examiners that they possess reasonable facility in the use and comprehension of the spoken idiom.

(18) German.

No set books are prescribed for study. There will be a written and oral examination on lines similar to those described under Head 17 above.

(19) Latin.

No set books are prescribed for study. The passages for translation into English will be taken from both prose writers and poets. Candidates will also be required to translate pieces of English prose of moderate difficulty into Latin.

(20-22) Advanced Science Courses.

The Science subjects in which Advanced Courses may be taken are (i) Physics, (ii) Chemistry, (iii) Botany, and (iv) Rural Science.

The instruction in these subjects must be of a practical and experimental character, and in general accordance with the following syllabuses, which are not exhaustive. Students may receive credit for independent practical work lying outside a Syllabus, provided that this extra work and the work set out in the Syllabus are co-ordinated so as to form a consistent whole.

The proficiency of students will as a rule be tested partly by inspection of their practical work during the course of training, partly by a scrutiny of their note-books, and partly by means of written examination. Any student who takes up one of the four Advanced Science Courses will be required to submit for inspection a record of the experiments which he has actually performed. This record must be in his own words, and each of the entries which it contains must be made at the time of or immediately after the experiment to which the entry refers. The record must be accompanied by a short separate index of its contents. A practical or oral examination may be held, but in such a case due notice will be given.

The written examination will be held at, or shortly before, the close of the Students' period of training. No credit will be given for this examination in any case where the practical work appears to be insufficient or unsatisfactory.

(20) Physics.

Students taking this course will be expected to have a knowledge of the subjects included in Parts I. and II. of the Syllabus of Elementary Physics and Chemistry set out on page 68.

Motion of falling bodies. Atwood's machine.
Pendulum experiments. Potential and kinetic energy.
Units. Mass, Force, Work, &c.
Statical Couples. Moment of a force.
Boyle's Law.

Coefficient of Expansion of solids, liquids (absolute and apparent), and gases. Method of measuring.
 Accurate methods of measuring specific and latent heats.
 Vapour pressure. Boiling point.
 Variation of Boiling point with pressure.
 Determination of Vapour density.
 Reflexion at spherical surfaces and formation of images. Refraction by prisms. Minimum deviation. Total internal reflection, critical angle. Methods of measuring refractive indices. Formation of images by single lenses; real or virtual images. Focal lengths, simple telescope and microscope.
 Magnetic field. Lines of force. Law of magnetic force. Magnetic induction. Direction of the earth's magnetic force at a place. Horizontal and Vertical Components.
 Electrification by friction and induction. Frictional Machines.
 Simple phenomena of electrified bodies.
 Gold Leaf Electroscope. Conductors and Insulators.
 Distribution of Electrification on Conductors.
 Hollow Conductors.
 Electric field. Strength of field. Potential. Condensers.
 Simple Voltaic cells. Description of chemical action.
 Magnetic field and magnetic measurement of current.
 Galvanometers. Tangent galvanometer, the forces acting on the needle, &c.
 Resistance. Electromotive Force. Difference of potential, Ohm's Law. Volt, Ohm, Ampère. Practical Units. Heat developed on a circuit, Joule's Law.
 Electromagnet. Elementary phenomena of electromagnetic induction.
 Decomposition by Electric current. Faraday's Law.

(21) Chemistry.

Students taking this course will be expected to have a knowledge of the subjects included in Parts I. and III. of the Syllabus of Elementary Physics and Chemistry set out on page 68.

- Preparation, properties, and composition of hydrogen chloride, ammonia, gaseous oxides of nitrogen and carbon.
- A detailed study of the preparation and composition of various compounds chosen with a view to the explanation and proof of the laws of gaseous combination, definite and multiple proportion.
- The atomic theory. Determination of atomic and molecular weights. Formulæ and equations. Valency.
- A comparative study of the halogens and their compounds. A comparative study of phosphorus, antimony, and bismuth, and some of their compounds.
- A comparative study of the characteristic properties of some of the well-known metals, and their interaction with water, acids, &c. The formation and characteristic properties of the compounds so formed.
- Classification of elements. Periodic scheme.
- A study of a few typical carbon compounds with the object of showing the methods used in characterising them, in oxidising, in reducing, and in assigning constitutional formulæ.

(22) Botany.

1. General structure and life history of a flowering plant. Microscopic work.
2. The formation of the seed. Pollination and fertilisation. Germination of seeds. Comparison of different types of germination.

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3. The nutrition of plants. Physiology of the leaf: assimilation; respiration; transpiration. Function of the root: conduction of food substances. Geotropism and Heliotropism.

4. Adaptation of plants to their surroundings: protection against animals; adaptations to cold and drought; shapes of leaves and the causes to which they are due; insects and flowers; the dispersal of fruits and seeds.

5. Elementary classification of common British flowering plants and trees and their determination by means of a Flora.

N.B.—The whole course should be done practically. The Syllabus only includes such topics as can be treated practically either by the examination of specimens or experimentally.

(23) Rural Science.

In the following course the class room and laboratory work should be carried out chiefly during the Winter months, leaving the Spring and Summer for practical gardening and field expeditions.

It is essential that for those students who take this course, the Ordinary Course of Elementary Science should be suitably correlated. Such a course has been sketched out as a guide for those taking the Advanced Course; but it is not to be considered as part of the Advanced Course.

(a) PLANT LIFE.

Seeds.

A variety of seeds should be examined and the conditions of germination and mode of growth studied.

Roots.

Effects of gravity. Rate of growth. Root hairs, absorption. Examination of various forms of roots.

Leaves.

Reason of shapes. Structure of leaf veins. Examination of upper and under skin of leaves.

Transpiration.

Experiments in transpiration and the movement of sap in stem. Conditions of amount of loss.

Formation of Starch.

Effect of sunlight, and other conditions necessary for the formation of starch.

How Starch Feeds the Plant.

Disappearance of starch at night. Conversion of starch into sugar, &c.

Stem and Buds.

Development of buds. Structure of woody stem. Yearly growth of stem. Creeping stems, above and under ground. The development of a bulb and corn traced from month to month.

Flowers, Fruits, and Seeds.

The parts of a flower and their uses. Transference of pollen. Catkins. Study of fruits. Dispersal of fruits and seeds.

Review of Plant Life.

Early dependence on food provided by parent. How the plant obtains, stores and spends its food. Annuals and biennials, bulbs, tubers and perennials.

Life Histories of a few Common Insects in relation to Plant Life.

(b) FIELD BOTANY.

Examination of fresh plants leading up to concise description.

The classification of the common field plants occurring in the locality and the recognition of fresh specimens in a few of the natural orders.

The distinctive characters of the classes Dicotyledons and Monocotyledons.

The adaptation to environment of a few plants, the different provisions for the persistence of individual plants, annual, biennial and perennial, and the provision of seeds for their dispersal.

Study of the crops and trees grown in the locality with special reference to climatic conditions and economic value.

(c) GARDENING. THE SOIL.

Plant Food supplied by Soil.

The ash of wood, leaves, &c., examined to discover food requirements.

Source of these and of nitre, traced to the soil by plant cultures.

How Plants appropriate Soil Food.

By the aid of water and carbonic acid gas.

Origin and Composition of Soils.

Soils and subsoils studied *in situ*. Experiments on the mechanical composition of various soils. Classification and study of the properties of soils, including porosity and capillarity, &c.

The effect of lime on soils. The difference between surface soil and subsoil; decayed plant substance. Humus and its fermentation.

(d) WORK TO BE DONE IN THE GARDEN.

Vegetable Culture.

Preparing the ground by digging, trenching, or bastard trenching, according to the character of the soil and subsoil. Using tools in such a way as to get the most efficient work with the least expenditure of energy.

Applying manure as a means (1) of improving the texture of the particular soil, (2) of supplying the plant food in which it is deficient.

Preparing seed beds with a view to securing the advantages of a fine tilth for germinating seeds; drawing drills at distances suitable for particular crops; sowing seeds at depths and in quantities suitable for particular seeds.

Thinning and transplanting seedlings, and consolidating the soil round transplanted plants, as a means of securing vigorous growth.

Raising plants to form a succession of crops and double cropping with a view to obtaining greatest return for least outlay. Suitable position for early crops in relation to shelter, for celery in relation to water supply, and for all crops in relation to light.

Stirring the soil during the growing season as a means of (1) retaining moisture and supplying plant food, (2) keeping down weeds. Studying the weeds with a view to finding the best means for their complete eradication.

Studying any insect or fungoid pest attacking the crops, with a view to applying preventive or remedial measures successfully. Spraying potatoes.

Cultivating crops requiring special methods of propagation and management, *e.g.*, rhubarb.

Gathering crops at a time most advantageous for sale or for storing.

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Fruit Culture.

Preparing the soil and planting fruit trees and bushes with a view to developing surface roots.

Selection of varieties of apples most suitable for the district and of varieties which will give a successional supply of fruit throughout the autumn and winter.

Pruning in relation to (1) modes of fruiting (on new shoots, old spurs, second year shoots), (2) form, (3) admission of light, (4) removal of useless branches to induce formation of fruitful wood, (5) removal of dead branches harbouring fungoid growths.

Root pruning as a means of restricting vegetative growth and inducing fruitfulness.

Protecting fruit trees and bushes against birds and frost. Spraying and applying other remedies against insect pests. Washing for American blight, lichens and mosses. Protecting wounds against canker.

Propagating strawberries and raspberries. Propagating bush fruit by cuttings. Raising fruit stocks. Grafting or budding apples, pears and plums. Grafting old trees. Gathering, storing and packing fruit.

Flower Culture.

Raising from seed a variety of annuals and biennials selected with a view to having a succession of flowering plants throughout the summer months.

Growing bulbs and perennials suitable for studying different methods of propagation, (a) by seeds, (b) by cutting, (c) by division, (d) by layering.

Propagating roses by budding. Raising a few window plants.

Clipping hedges in summer or winter according to the nature of the hedgerow plants, and shaping with a view to getting bottom growth. Keeping pathways clear and the whole garden smart.

(23a) Elementary Science.

(A course specially adapted to the requirements of students intending to take an Advanced Course in Rural Science.)

The following Syllabus merely indicates the ground to be covered. The experiments should be made by the students, but it is also essential that revision classes should accompany the practical work, in order that the results of the experiments may be discussed, the lessons they teach amplified and their practical applications pointed out.

Physical properties and composition of the air as ascertained by experiments; combustion; the formation of oxides, and respiration.

Study of the physical properties of water, including vapour pressure, density, specific heat and latent heat; water as a solvent; applications to climate, hygiene, and agronomy. The composition of water. Physical and chemical changes.

Examination of some common oxides produced by combustion; acids, bases, and salts; essential difference between metals and non-metals. Experiments on the properties of the metals important in rural science and of their oxides with a view to their classification. Lime, magnesia, potash, soda, alumina and oxide of iron require closer study. Combining proportions.

The non-metallic elements. Starting with sulphur, prepare sulphurous anhydride and sulphuric acid. Volumetric determination of the proportion in which sulphuric acid combines with bases to form salts. The character of the sulphates important in rural science. Chemical interaction in solution. Investigation of the composition of common salt and other chlorides, including sal ammoniac. Nitrification and the formation

of nitrates. Nitric acid as an oxidizer. Starting with phosphorus, prepare phosphoric anhydride and acid and phosphate and "superphosphate of lime."

Sand and clay. The characteristic property of silicate of aluminium and its importance in rural industries. Chemical disintegration of double silicates. Charcoal as an absorber. Instability of carbonic acid. Determination of the composition of carbonate of calcium. Hardness of water. The laws of chemical combination.

The carbohydrates, their properties and hydrolysis. Carbonization and the production of humus, peat and coal. Hydrocarbons. Fermentation of sugar; the alcohols; applications to baking and brewing. Production of vinegar from alcohol; the organic acids. Fats and their "saponification."

Urea and its fermentation. Preparation of some common albuminoids, their coagulation and peptonization. Application to dairying, cookery, and the digestion of food. Diffusion and osmosis: application to plant life. Heat of combustion and the value of food.

(24) Housecraft (*for Women only*).

A college proposing this subject must present a syllabus dealing in detail with the following topics:—

- (a) The requirements of a healthy home. Site, aspect, water supply, drainage, ventilation, warming, lighting, general rules for choosing furniture.
- (b) The elements of house management. Practical housework, including the cleaning of rooms. Wages and expenditure.
- (c) Suitable clothing for working people and their children. The care and cleaning of clothing, elementary laundrywork.
- (d) Food budgets. The outline of food preparation. The nutritive and other values of various foods in relation to diet, including the cooking, from simple and cheap materials, of such meals as are needed by working people and their children. The feeding of infants, young children and invalids. Simple remedies for common ailments.

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APPENDIX D.

CONDITIONS UNDER WHICH A DEPARTMENT FOR THE TRAINING OF TEACHERS FOR ELEMENTARY SCHOOLS MAY BE RECOGNISED FOR A FOUR YEARS' COURSE (being the Appendix to the Statement of Grants available from the Board of Education in aid of Technological and Professional Work in Universities in England and Wales).

1.—(a) A University Institution possessing a Department for the training of teachers for Elementary Schools may be recognised as providing a Four Years' Course, of which the first three years are to be devoted wholly or mainly to study in preparation for a Degree, and the fourth is to be devoted wholly to professional training in preparation for the work of teaching in Public Elementary Schools, subject to the exception that a student may enter for a Final Examination for a Degree not later than October of the fourth year. Before approving a Four Years' Course in any case, the Board will require, among other matters, to be satisfied that the course of study which is proposed for each student will be such as to fit him for the better discharge of the duties for which he is being trained, and that satisfactory arrangements will be made for a Final Examination in the necessary professional subjects in accordance with paragraph 5 (a).

(b) A student may be admitted to the second, third, or fourth year of a four years' course if he has completed one year, or two years, or the whole of the course for a Degree, as the case may be, before entering the Training Department, and if he satisfies the special conditions as to age stated in paragraph 2 (a).

(c) No grant will be payable in respect of any time spent by a student who has already qualified for a Degree in studying for a further Degree.

2.—(a) Candidates proposed for admission to the first year of a four years' course must be over 17 years of age on the 1st August in the year of admission. Candidates proposed for admission to the second, third, or fourth year of the course must be over 18, 19, or 20 years of age, as the case may be, on the 1st August in that year.

(b) Candidates must have passed a Matriculation or other equivalent examinations under conditions approved by the Board.*

(c) Candidates must be qualified under the University regulations to enter upon full courses of study for Degrees without further examination.

(d) Candidates must as a condition of admission give an Undertaking to the Board for the purpose of securing that in return for the grant payable under this Statement they will complete their training, and thereafter actually follow the profession of a teacher in an approved school for such period or periods, or repay to the Board such proportion of that grant, as may respectively be specified in the Undertaking. Copies of the Undertaking will be supplied on application.

(e) Candidates must be reasonably likely to obtain a University Degree not later than the end of the calendar year in which the third year of their course concludes, and must enter with the *bonâ fide* intention of doing so. Exceptions to this rule may be made in the case of candidates who will take an Honours Course which ordinarily occupies four years, subject to the condition that no person may spend more than three years in studying for a Degree as a recognised student.

(f) The Medical Officer of the Training Department must satisfy the Board by a certificate in a prescribed form that the health of each candidate

* For these conditions see Appendix A. II. of the Regulations for the Training of Teachers for Elementary Schools.

for admission to the course is sufficient to allow the course to be entered upon without undue strain.

3.—(a) At the end of the first year of the course of training of each student—

- (i) the authorities of the University Institution will be required to report to the Board as to whether they consider the student to be fit to continue with profit the course for a Degree. A student should not as a rule be reported as fit to continue the course for a Degree unless he has passed by the end of his first year an Intermediate Examination for a Degree, or such other examination as is ordinarily taken by University students at the end of the first year of a course for a Degree.
- (ii) The Medical Officer must certify whether he considers the health of the student sufficient to allow the course to be continued without undue strain.
- (b) A student who, at the end of his first year, is not reported by the authorities of the Training Department as fit to continue with his Degree course, or for whom the required Medical Certificate cannot be forwarded, will only be allowed to remain at the University Institution until the end of his second year. During his second year the authorities of the Training Department must make arrangements to provide for such students a course of study, which should be devoted wholly or mainly to professional work, and should lead up to an examination of the kind contemplated in paragraph 5 (a).
- (c) A student who is reported to the Board at the end of his first year as being fit to proceed with his Degree Course must be allowed to complete a course of training for the number of years for which he was originally admitted, except in the event of circumstances arising which would justify his dismissal from the University Institution.

4.—(a) The course of study of every student must include on its professional side the following subjects, unless in any case the Board have approved the omissions of one or more of these subjects under the conditions stated below :—

The Principles and Practice of Teaching.
 Hygiene and Physical Training.
 Theory of Music and Singing.
 Reading and Recitation.
 Drawing.
 Needlework (for Women).
 Handwork.

(b) Practical work in Science must be included in the course of every student who does not produce evidence of having received instruction in Practical Science satisfactory both as to amount and as to the conditions under which it was given.

(c) Students whom the authorities of the Training Department can show to the satisfaction of the Board to be proficient in Drawing and Needlework respectively on admission to the Department, need not receive instruction in these subjects, but their proficiency in each of these subjects will be tested during their period of training in the manner provided by paragraph 6. Singing, together with the examination in the Theory of Music, may be omitted by students who are incapable of profiting by practical instruction in Music.

(d) The instruction in the Principles of Teaching must include instruction in the methods of teaching all the subjects taught in a Public Elementary School. A student will ordinarily be expected to spend twelve weeks of his course of training in class teaching. The greater part of this period must be spent in a Public Elementary School, and the remainder either in a Public Elementary School or in some other school approved by the Board as providing practice suited to the needs of intending teachers in

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Public Elementary Schools. In the case of students who have had practical experience, previous to entering the Training Department, as Teachers in Elementary Schools in some capacity recognised by the Board, the period of practice in class teaching may be reduced by such an amount as may be approved by the Board in particular cases, provided that the time given to practice in class teaching is in no case less than eight weeks.

5.—(a) Students in their last year must attend an Examination in the Principles of Teaching, and Hygiene, and also in the Theory of Music, unless they have been exempted from it under paragraph 4 (c).

(i) The Examination, which will be conducted by the University, should be designed with special reference to the requirements of persons intending to become teachers in Elementary Schools.

(ii) Arrangements should be made by which one or more of the Board's officers may act as Assessors on the Examining Board. The proposed papers of questions, with the syllabuses on which the examination is based, should be submitted for the approval of the Board through the Board's Assessor, who will attend any meeting of Examiners at which the results of the examination are considered, but will not himself set questions or mark answers. Before the List of Passes is published, in so far as it concerns recognised students, the Assessor should have access to all records of such students' work, and should have the right to call for their worked papers in this and other examinations, and to refer them to the Board. The Board reserve the right to confirm or to veto any proposals put forward by the Examining Board.

(b) Students must not be prepared for, or allowed to enter for, any examination in secular subjects in their last year, other than that referred to above.

6. The proficiency of students in—

The Practice of Teaching,
Physical Training,
Reading and Recitation,
Drawing,
Needlework (for Women),
Singing,

will be ascertained as follows :—

(a) Students will be tested in these subjects in the last year of their course. The staff of the Training Department will indicate their opinion as to the proficiency of individual students in each of the subjects named (so far as they are included in the courses of study) by keeping a record of marks and a register showing the attendance of students at lessons in these subjects. These documents will be subject to the scrutiny of the Board or of their Inspector.

(b) Before the end of the academical year the Authorities of the Training Department will submit to the Board lists of the Degree students to be tested in that year, arranged in four groups according to proficiency in each of these subjects. The highest group should comprise those students only who are specially proficient, and may therefore be expected in ordinary circumstances to be small. The Inspector will award marks for each of these subjects after considering the lists, and imposing such tests as he may think necessary. Students who have been exempted from Drawing or Needlework in accordance with paragraph 4 (c) should be included in these lists with the other students, and their proficiency in these subjects may be tested by the Inspector.

7. The Certification of students will be subject to the following conditions:—

- (a) The Board will consider (i) the results of the Final University Examinations for a Degree, and (ii) the results of the students' Examinations in the subjects mentioned in paragraph 5 (a) and the grouped lists of students submitted by the Training Departments, together with the awards of the Inspectors upon their lists; and will then determine which of the students are qualified for recognition as Certificated Teachers.
- (b) A student will not as a rule be determined to be qualified for recognition as a Certificated Teacher, unless he has passed a Final Examination for a Degree; but the Board may, if they think fit, regard as so qualified a student who has failed to pass his Degree Examination if he has passed through a Four Years' Course, and is specially recommended by the Authorities of the University Institution.
- (c) A student who is not determined by the Board at the end of his period of training to be so qualified may, if the Board think fit, be recognised as a temporarily Certificated Teacher after leaving the Training Department for a period of two years, which may, if special reason is shown, be extended by the Board for a third year.
- (d) At the end of that period this recognition will cease, unless the student has either (i), if his failure to qualify for such recognition was due to failure to pass his approved Final Examination, passed either the Examination in which he previously failed, or the Board's Final Examination; or (ii) if his failure to qualify for such recognition was due to failure to pass a satisfactory examination or test of proficiency in any of the subjects named in paragraph 5 (a) or 6, passed such further examination or test of proficiency in those subjects, or any of them, as may be required by the Board.
- (e) A student who has taken a special course of training under paragraph 3 (b) will not be determined to be qualified for recognition as a Certificated Teacher unless he has passed such examination as is required by the Board. The Board may, if they think fit, regard such a student as qualified for recognition as a Certificated Teacher if he has completed satisfactorily his course of professional study under paragraph 3 (b) and is specially recommended by the Authorities of the University Institution. A student who is not regarded as qualified for recognition as a Certificated Teacher on the above grounds may, if the Board think fit, be recognised as a temporarily Certificated Teacher for a period of two years after leaving the Training Department; and in order to qualify for permanent recognition as a Certificated Teacher he will be required to pass within that period such further examinations or tests as may be required by the Board.
- (f) A student may obtain distinction in the Principles and Practice of Teaching, in Hygiene and Physical Training, and in Theory of Music and Singing, but in no other subjects.

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APPENDIX E.

GENERAL DIRECTIONS FOR MARKING EXAMINATION PAPERS.

See Article 23 (b).

(These Directions should be carefully read before any papers are marked.)

1. The marks for each question should be entered distinctly in the space provided opposite the answer, preferably in coloured pencil. The total marks should be entered in the space provided on the cover of the Examination book.

2. Especial care must be taken to ensure that every answer for which credit may be given is marked, that the total number of marks entered on the cover of the book is correct, and that the Candidates have strictly observed the rules set forth on the Examination Papers. Answers written on the left-hand pages of the books, and those given in excess of the number allowed, should not be marked. The last excess answer, or answers, must be ignored.

3. To ensure accuracy, each book of answers, after revision by one person, should be looked through by another, in order that the correctness of the addition may be verified and any omissions detected.

4. All mistakes in the answers should be indicated, except slight faults in Composition and Spelling, which, in ordinary cases, may be disregarded in apportioning the marks. In a Language paper all mistakes must be indicated.

5. In mathematical work slight errors in calculation or in the use of signs will often lead to entirely wrong results. Mistakes of this kind should be dealt with leniently, marks being given, where possible, for intelligence and for knowledge of proper methods. Some marks should be given for correct solutions by any legitimate and intelligible method. Some marks should be given for any intelligent attempt.

6. In marking the exercises in English Composition regard should be paid (1) to intelligent appreciation of the subject, (2) to grammatical accuracy and correctness of expression.

7. In apportioning the marks in such subjects as English Language and Literature, Principles of Teaching, History, or Elementary Science, due weight should be attached to the logical arrangement of the answers and to the accuracy and suitability of expression as well as to the correctness of the facts.

APPENDIX F.

PRACTISING SCHOOLS.

The Education Act of 1902 has materially altered the relations which formerly existed between the authorities of most Training Colleges and the Practising Schools attached thereto. Under Sections 6 and 7 of the Act, the Public Elementary Schools which have been used as Practising Schools fall under the general control of the Local Education Authority, hence the Governing Body of a Training College have no longer the same practically unrestricted right to send their students to practise in the schools. The Board, however, confidently hope that, in view of the benefit conferred upon the community by proper provision for the training of teachers, Local Education Authorities and School Managers will do all that is possible, without impairing the efficiency of the schools, to give facilities for the practice of Training College Students, and that at the same time the Authorities of the Training College will carefully refrain from making any demands which may militate against the welfare of the children and teachers in the schools which are to be used as Practising Schools.

The position may be summed up as follows:—

- (i) Under Article 54 of the Code it is one of the conditions for the recognition of a school as a public elementary school that students from a Training College are allowed to attend it for the purpose of practical instruction on such conditions as may be approved by the Board.
- (ii) The Governing Body of the Training College have no special claim upon the use of a particular elementary school merely because it has in the past been used as a Practising School.
- (iii) The Board will allow a charge for the admission of students to be made only where it can be shown that the school is put to expense by their admission, or that extra work deserving remuneration is thereby put upon members of the school staff.
- (iv) The Board will not sanction any arrangement which seems likely to interfere with the efficiency of a public elementary school (used as a Practising School) as a place of elementary education, or to put any undue burden on the teachers of such a school.

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APPENDIX G.

CIRCULARS AS TO THE ADMISSION OF CANDIDATES TO
TRAINING COLLEGES.

These Circulars are reprinted with some modifications necessary to adapt them to the terms of the current Regulations.

I. (*Circular 570.*)

1. A considerable number of enquiries have been addressed to the Board by Local Education Authorities and others responsible for the conduct of Training Colleges as to the manner in which the Board propose to interpret the conditions which are required by Article 8 of the Regulations for the Training of Teachers for Elementary Schools to be observed as regards the admission of candidates to Training Colleges or Hostels. The Board think therefore that it may be useful for them to indicate in general terms the lines on which they propose to proceed. Other points may, no doubt, arise on which further guidance is felt to be desirable, and the Board would be ready to discuss further with the Authorities of any Training College any special difficulties that may be felt to be applicable to the case of that College. They hope, however, that the explanation here given will be sufficient to clear up the points on which a decision is most immediately needed.

2. The Board understand that the provisions of Article 8 have in some cases been interpreted as laying down a rule that candidates for admission to a Training College must be offered places in accordance with the order in which their applications are received. This is not required by the terms of the Regulations, and it is not in any way the intention of the Board to lay down such a rule. As it may now become necessary for the Board to inquire into the reasons for the rejection of any applicant, it is necessary that full information should be available as to the circumstances under which each application was made. Article 8 (a) accordingly lays down the rule that the Principal or Correspondent of every Training College or Hostel in receipt of Grant must keep for the use of the Board of Education a Register of candidates for admission in the order in which their applications are received and opened. Priority of application will, however, only be one point to be taken into account in determining whether preference should be given to a candidate. It will be open to the Authorities of a Training College to refuse admission to a candidate whose name appears at the head of the Application Register, and give preference to a candidate whose name appears lower on that Register, provided that they are able in each case to show reasonable ground for their preference.

3. Local Education Authorities which have provided Training Colleges will, in most cases, desire to give preference to applicants coming from their own areas, or from areas of Authorities which have contributed to the cost of the establishment or maintenance of such Colleges; and it is possible that the Governing Bodies of other Training Colleges may desire, either at once, or as a result of arrangements which they may in future make with Local Education Authorities, to give a similar preference to applications on the ground of locality. Preference of this kind is fully compatible with the new Regulations, provided that in carrying out this principle all applicants from any particular locality are treated alike. Thus, an applicant whose name appears first in order on the Application Register of any College may be refused admission solely on the ground that he does not come from a particular area to which the Authorities of that College have determined for good reasons to give a preference. Refusal on this ground will be a sufficient answer to any application that may be made to the Board by the candidate under Article 8 (e), provided that the College can show that no applicant whose name appears lower on the Application Register, and who does not come from the preferred area, has been admitted. If, however, an applicant

who does not come from the preferred area has been admitted in spite of his name appearing lower on the Application Register, it will be necessary for the Authorities of the College, if called upon, to show some other reason for refusing admission to the first-mentioned candidate.

4. Another reasonable ground for giving preference would be the attainments of the various applicants in secular subjects as tested by examinations or other evidence. Training Colleges which are connected with Universities will naturally desire to draw their students exclusively or mainly from candidates who have satisfied the conditions required by the Board in the case of students who wish to read for University Degrees. Other Training Colleges may wish to give preference to applicants of this kind to a limited extent, or may wish to give a general preference to applicants who have qualified for admission by passing a Matriculation Examination or one of the Senior Local Examinations rather than the Preliminary Examination of the Board. Others again may prefer to limit admission to candidates who have qualified by passing the Preliminary Examination. Preferences of this nature would all be recognised by the Board as reasonable.

5. The Board's Preliminary Examination is likely in any case to be for the present the main avenue of entrance to Training Colleges, and it has been represented to the Board that the present arrangement of the general list in alphabetical order with marks of distinction does not of itself afford sufficient guidance to Training Colleges in making their selections under the new conditions now imposed. The Board have, therefore, decided that at some date between the holding of Part I. and Part II. of the Preliminary Examination for the Certificate, each College will be required to furnish to the Board the list of its registered candidates for admission in order of application. As soon as possible after the Examination the general alphabetical List of Results will be published as at present; but, either before this publication or simultaneously, the Board will supply to each College a list of its own candidates arranged in order of merit, which may serve to assist the several Colleges in making their final choice.

6. The Board do not propose to lay down a rule that a candidate placed higher in this order of merit is to be selected in preference to a candidate placed lower in this order. As above indicated, a Training College will be justified in giving preference to candidates on other grounds, *e.g.*, as coming from a particular area. It has, indeed, been represented to the Board that the Authorities of some Colleges prefer not to be guided too much in their choice of candidates by examination results, but consider that a better selection can be secured by considering reports received from the Headmasters or Headmistresses of the Schools or Centres which the candidates have previously attended, or from personal interviews conducted by the Principal of the Training College. The Board desire to leave room for this method of selection, on the condition always that, if one candidate is excluded in favour of another, the grounds on which the decision is made are such as the Board can approve under the terms of the Regulations.

7. The Regulations do not now prohibit the requirement either of a personal interview or of an examination. The Board, however, think that it is undesirable that the candidate should have to bear the expense involved by the necessity of having to travel to the College or elsewhere for the purpose of an interview or an examination. It is accordingly provided in Article 8 (g) of the Regulations that, if the Authorities of a College require any candidate, as a condition of admission, to attend for the purpose of an interview or an examination, either at the College or elsewhere, they must defray any expenses necessarily incurred by the candidate in attending the interview or examination.

8. Training College Authorities are not now allowed to require any particular candidates to present themselves at a particular College, to be examined for the Board's Preliminary Examination for the Certificate. The place where each candidate is to be examined will be decided by the Board, on consideration solely of geographical convenience for the candidates; and

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in any case in which it is necessary that the rooms of a Training College should be used for the purposes of the Board's Examination, the selection of the candidates to be examined there will be made by the Board and on these grounds only.

9. If a candidate is rejected on the result of an interview who would, apart from that, have a prior claim to consideration under the principles stated in the earlier part of this Circular, the reasons for rejection must be recorded, so as to be available for the information of the Board in the event of an appeal being made against the decision. These reasons need not necessarily be communicated to the candidate, and the Board will be prepared to treat them as confidential. No questions may be asked of a candidate at an interview as to any matter which would come within those grounds which, under the Regulations, would not be deemed reasonable. If appeal were made to the Board in respect of a candidate who had been refused admission to a College, and if it should appear that questions of this kind had been put to the candidate at an interview, the Board would regard this as strong evidence that the refusal of admission had in such a case been made on improper grounds.

10. It has been suggested to the Board that the Authorities of a Training College may find themselves inconvenienced by candidates applying for admission to several Training Colleges at once. Such a tendency might be checked by the charge of a small fee as a condition of placing the name of any applicant on the Register of candidates for admission. The Board would regard the charge of a fee for this purpose as reasonable, provided that the following conditions are observed:—

- (a) The fee must not exceed 10s.;
- (b) If the candidate is eventually admitted to the College, the registration fee must be credited towards his entrance fee, or, if there is no entrance fee, towards the tuition fee for his first year;
- (c) If the College is eventually unable to offer the candidate a place, or if the candidate withdraws his application before a place has been offered to him or is prevented from entering the College either through illness or through failure to pass his qualifying examination, or through any other cause which he could not foresee at the date of application, the fee must be returned to the candidate;
- (d) If the candidate is offered a place, but fails to avail himself of it for reasons other than those mentioned above, the fee may be retained by the College Authorities, and should be applied to the general expenses of the College.

II. (Circular 715.)

MEDICAL EXAMINATION OF CANDIDATES FOR ADMISSION.

1. The Board have had under consideration the arrangements to be made for the medical examination of candidates for admission to Training Colleges, and they have decided that the arrangements shall follow generally those made for the examination of candidates for admission in 1908, as set out in Circular 588. This Circular is reprinted in Appendix I. to the Regulations for the Training of Elementary Teachers, 1908.

2. Under Article 10 (a) of the Regulations it is required that before a candidate is admitted as a recognised student the Board must be satisfied by a medical certificate in a prescribed form that the state of his health is satisfactory and that he is free from serious bodily defect or deformity. The Board have decided that they will continue to accept for this purpose a certificate given either by the Medical Officer of the College to which the candidate is applying for admission or by one of the medical officers nominated by the Board for the purposes of the Elementary School Teachers (Superannuation) Act, 1898. If the Authorities of a Training College wish to make it a condition of admission that all candidates should, before being definitely accepted, be seen and examined by the Medical Officer

of the College, it will still be open to them to do so, provided that any travelling expenses and other incidental expenses incurred by the candidate in coming to the College for this purpose are defrayed by the College Authorities in accordance with the general rule laid down in paragraph 7 of Appendix G. (I.) of the Regulations with reference to cases in which an interview is required. Otherwise candidates must be given the option of being examined by any of the Medical Officers nominated by the Board for the purposes of the Elementary School Teachers (Superannuation) Act, 1898.

3. The Board contemplate that the Authorities of a Training College will, as a rule, only require the medical certificate on the prescribed form from those candidates who have already been provisionally selected for admission to the College. The Board will not, however, refuse to allow the Authorities of the College to require a medical certificate on the prescribed form from every candidate for admission to the College, on the understanding that the authorities will, in that case, be ready on request to transmit the medical certificate received by them in respect of any candidate either to the Board or to the Authorities of any other College to which a candidate may apply for admission.

4. The report, which will be made on Form 4 T.C., will be sent by the Medical Officer to the Officer of the College who is named for that purpose in the heading of the Form. In considering the reports the Board will not regard it as reasonable for the Authorities of the College to reject on medical grounds any candidates reported as falling in Class A. except after an appeal to the Board as provided by paragraph 6 below. The College Authorities will be free to decide in each case whether to accept or reject on medical grounds candidates reported as falling within Class B. Candidates reported as falling within Class C. may not in any case be admitted, except after an appeal to the Board as provided by paragraph 6 below.

5. In accordance with Articles 27 (f) and 44 (e) of the Regulations, the Board will require, in the case of a student proposing to take a Course forming a recognised stage in a Course for a Degree, that the Medical Officer of the College shall certify that the student is physically fit for the extra strain that will be placed upon him.

6. Cases may occasionally arise in which an appeal is made to the Board owing to some differences of opinion having arisen as to the state of health of a candidate for admission to a Training College, or of a student. Such cases are likely to fall into three classes :—

- (i) where a candidate for admission has been rejected by the Authorities of the College on medical grounds and an appeal has been made to the Board under Article 8 (e) of the Regulations ;
- (ii) where a candidate on arrival at College is found to be suffering from some physical defect of which, in the opinion of the Medical Officer of the College, sufficient account was not taken in the medical report on Form 4 T.C., and which, in his view, renders the candidate unfit for admission to the College ;
- (iii) where a student, during his period of training, develops some physical defect which, in the opinion of the College Medical Officer, renders further retention of the student at the College undesirable, and where, therefore, an appeal may be made to the Board under Article 8 (j) of the Regulations.

7. In such cases the Board have decided that they will for the future where necessary, before deciding an appeal, instruct one of their medical staff to examine personally the candidate or student and to report. The Board will endeavour to secure that any such examination is made with as little delay as possible. Pending the decision of the Board the candidate or student should be retained at the College, unless their instant departure is considered essential in the interests of the other students.

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APPENDIX H.

PREMISES OF TRAINING COLLEGES AND HOSTELS.

General Conditions.

1. The following paragraphs are intended to set out the main principles which should be borne in mind when it is proposed to provide new buildings to serve as Training Colleges or Hostels. The rules here stated do not constitute a standard by which existing premises can be judged, and they are plainly unsuitable for any rigid application to proposals for enlarging or otherwise improving existing buildings. Such cases must be dealt with individually as they arise, with reasonable regard to the principles here set forth.

2. Minute rules as to the planning of Training Colleges and Hostels are unnecessary, for the circumstances and needs of Colleges vary widely, and it is not desirable that all buildings should be of one type. It may, however, be stated that the type which has been most usually adopted in the case of new foundations during recent years is either the Day Training College with Hostels attached or the Residential College which provides for the teaching and for the residence of the students in separate buildings. These two types resemble each other in most points of planning and differ only in the degree of closeness of the connection between the teaching and residential parts of the institution. It is recommended that any new scheme should conform to one or other of these types in the absence of some special reason to the contrary. Day Colleges without Hostels attached to them are not approved for women students unless it is possible for all the students attending the College to live at home.

3. The site for a Training College should be, as far as possible, situated in a healthy locality on open ground, with a suitable aspect. Whether the College is a Residential or a Day College, ample space should be provided for the purpose of recreation and organised games such as cricket, football, hockey, and lawn tennis. If adequate provision is to be made for this purpose, there will be required a site of from 8 to 10 acres in all for a College of 100 students, or from 12 to 15 acres in all for a College of 200 students. In a College attended by both men and women separate provision must be made for each sex, and the amount of ground required will be increased proportionately. The actual amount will vary according to the nature of the ground levels, &c., and the shape of the site, and a smaller site may be accepted where other provision can be made for the students' recreation and games, or where a site of the full size could not be acquired except at a prohibitive price.

4. The general scheme of the building should be based upon that of a College rather than upon that of a School; that is to say, careful provision should be made for private study, hours of recreation, opportunities of social intercourse, &c., for the students.

5. Adequate means of escape in case of fire must be provided in all Training College buildings.

6. The Board in judging the plans will pay special attention to the general arrangement of the building with regard to the comfort and health of the students, in view of the special requirements of each particular case. When the resources of the College do not admit of the scheme being carried out at once in its entirety, due allowance will be made, provided that it is clearly shown on the drawings how and when the future additions are to be made.

7. Due economy must be exercised in the arrangement of the scheme, and needless expense must be avoided by careful and compact planning. While the Board do not desire to limit unduly the treatment of the building.

they will not be prepared to sanction an undue expense in order to obtain architectural effect.

8. The Architect of the Board and other officers who may be concerned with Training College work will be glad to arrange for a conference in any case in which it is proposed to provide new Training buildings, or to improve existing ones, but in the first instance it is desirable that sketch plans showing what is proposed should be forwarded to the Board's office for examination. All Training College plans which are submitted to the Board should show clearly the purpose for which each room in the buildings is intended.

Provision for Teaching.

9. As a rule a Training College will require four class-rooms for every 100 students. In addition to these there should be either a lecture room or a spare class-room. Class-rooms should be designed for not more than 30 students each. The lecture room may with advantage be arranged to take 50 to 60 students.

10. The class-rooms or lecture rooms should conform to the well-understood rules which govern all school planning. They should be lighted from the students' left; the windows, like all other windows in the building, should be carried up to the ceiling, and the desks should be arranged within view of the lecturer in a fairly compact group. A class-room should provide at least 18 square feet of floor space for every student accommodated, and should be furnished with single desks.

11. One room at least should be arranged for general Science teaching; its size and equipment must depend upon the scope of the Science teaching which the College will provide.

12. There should be a room in which Drawing can be taught. The most suitable room for this purpose is one in which there are no cross lights, the light being admitted by windows on the north side only. If such a room is not available, the windows on one side of the room should be fitted with opaque blinds which draw upwards from the bottom. In small Colleges the lecture room or spare class-room mentioned above can be adapted for the purpose of teaching drawing.

13. A room should be provided in which Handwork can be taught.

14. A suitably equipped gymnasium should be provided in each College.

15. Every Training College should contain a good collection of books of reference and of standard works which students are likely to require but not likely to buy. A room will therefore be required as a library, of a size proportionate to the number of students in the College, and suitably furnished for purposes of study.

16. A room is required for the Principal, and, in a Mixed College, one for the Vice-Principal. Adequate rooms are also necessary for the staff, and for this purpose staff common rooms and cloak-rooms should be provided. More liberal provision must be made when the staff reside at a distance. Some small rooms in which lecturers may be able to take groups of students for tutorial purposes are desirable.

17. A Training College should contain some large room or hall in which all the students can be assembled. Such a room will be needed for examinations, and may be used also for the purpose of recreation, or by the use of partitions may be made to serve as lecture rooms.

18. In those Day Colleges where students live either at home or in Hostels at a distance from the College, adequate provision should be made for a mid-day meal to be taken on the premises.

Provision for Residence.

19. A Hostel or Residential College must contain proper accommodation for the boarding and lodging of the staff and students, rooms for study, and common rooms or recreation rooms.

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20. Residential accommodation should not be provided for more than 60 students in a single building, and if study-bedrooms cannot be provided this number should be reduced to 40.

21. When new buildings are being planned, study-bedrooms should if possible be provided for all students. In a study-bedroom at least 100 square feet of floor space and 900 cubic feet of air space is required for every student accommodated. Where the adaptation of existing buildings or other reasons make the provision of study-bedrooms impossible, students may sleep in ordinary bedrooms or in dormitories. In a dormitory from 65 to 70 square feet of floor space and from 750 to 800 cubic feet of air space must be provided for every inmate. In an ordinary bedroom a higher standard of floor space and air space for each inmate will be required.

22. One bath at least should be available for every 12 inmates. In altering existing houses to serve as Hostels it may not always be possible to provide a larger number of baths than this, but more liberal provision should be made in planning new buildings. Separate bathroom and lavatory accommodation should be provided for the staff. During the day-time one watercloset should be available for every eight inmates, and one or two closets should be available for night use.

23. When study-bedrooms are provided for all students special rooms for study are not needed, but the provision of study-bedrooms will in no way remove the need for common rooms or recreation rooms. When study-bedrooms are not provided the common rooms and study-rooms taken together must at the least provide accommodation for all the students lodged in the Hostel. When Hostels are attached to a Training College which is also attended by Day Students, the common rooms provided should be sufficient to allow of ready intercourse between the Hostel students and the day students. Space should be provided in the common rooms for standard books of light literature. In general the dining-hall or dining-room should not be used as a common room or a study-room, but in very small institutions two rooms may be made to serve the purpose of dining-room, common room and study-room.

24. Sick-room accommodation is necessary, and should be in a part of the building which can be isolated in case of infectious illness. Two good rooms should be provided, with a sunny aspect, also a room for a nurse, and separate bathroom and lavatory for sick-room use. In large institutions it is often more convenient to have the sick-room accommodation for all the Hostels in a separate building.

25. Suitable accommodation must be provided for the Principal of the College, and, in the case of a Mixed College, for the Vice-Principal of the College. A separate sitting-room and bedroom, suitably furnished, should be provided for every resident member of the staff. Sufficient provision should also be made for servants.

26. The bedrooms of lodgings occupied by students should provide the floor space and air space which would be provided were the students lodged in the Training College. The authorities of the Training College must satisfy themselves as to the sanitary state of all lodgings occupied by students.

APPENDIX J. (I.).

CONDITIONS UNDER WHICH STUDENTS MAY BE ADMITTED TO A THIRD YEAR OF TRAINING CONTINUOUS WITH THE ORIGINAL PERIOD OF TRAINING.

1. The Board sanction a Third Year of Training abroad in suitable cases in order that the students selected may qualify as teachers of Modern Languages by a systematic study of the languages of the countries to which they are sent. Such a Third Year of Training must be continuous with the original period of training.

2. The selection should not be made earlier than the winter of a proposed candidate's second year, by which time the Training College Authorities will have an intimate knowledge of his bent and capacity. In making application, the Training College Authorities should certify that the college career of the candidate has been in all respects satisfactory, that he is a good teacher, that he has already made some serious advance in the language of the country to which it is desired to send him, and that he has decided linguistic capacity.

3. In July candidates will be required to present themselves for oral and written tests at the Office of the Board.

4. Successful candidates who are proceeding to France will be required to attach themselves to the *Guilde Internationale*, and to pass an approved examination at or before the end of their period of study abroad.

5. Successful candidates who are proceeding to Germany will be informed by the Board after the examination in July what arrangements have been made for their stay in that country.

6. In the latter part either of July or of September at the conclusion of the year spent abroad, students will be required to present themselves at the Office of the Board to undergo such test as the Board may think proper to apply in order to satisfy themselves that the students' time has been profitably spent.

7. Students failing to pass the test approved in their case will not be recognised as suitable teachers of modern languages in any institution in which the Board's approval is required for the individual members of the staff, until they have satisfied the Board by passing the same or a similar approved test that they are fully competent.

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APPENDIX J. (II.).

CONDITIONS UNDER WHICH STUDENTS MAY BE ADMITTED TO A THIRD YEAR OF TRAINING TO BE TAKEN AFTER AN INTERVAL.

1. The Board sanction a Third Year of Training abroad in suitable cases, in order that the student selected may

- (a) Enlarge his knowledge of the principles and practice of his chosen profession, through his connection with a foreign Training College and by direct contact with the elementary schools of the country to which he proceeds;
- (b) Continue his general education by some study of the literature or history, or of the literature and history, of the country to which he proceeds.

Such a Third Year of Training may only be taken after an interval of not less than two years and not more than four years from the end of the original period of training.

2. At the close of the second year of training the Training College Authorities should nominate those of their students, if there are any, who after a period of service in a Public Elementary School would be likely to profit by a year abroad and who desire to be so nominated; and the Authorities should at the same time certify that such students have a fair working knowledge of the language of the country to which it is proposed that they should be sent, and that they show special promise as practical teachers. A nomination which is received after the end of the second year of training will not be entertained unless the circumstances are exceptional.

3. Before the end of the month of March preceding the date at which the proposed period of foreign study is to begin, nominated candidates should make application to the Board, accompanied by a certificate from the Local Education Authority under whom they are serving, or have served within the preceding twelve months, to the effect that they have shown special competency as practical teachers.

4. Candidates will be required to present themselves at the Office of the Board on some date about Whitsuntide after application has been made in order that the Board may be satisfied that they have a working acquaintance with the language of the country to which it is proposed that they should be sent, and that they are likely to profit generally by the proposed course.

5. With the foregoing aims in mind, the teacher, when making application for a third year abroad, must submit for approval a scheme of study which should, as a rule, comply with the following conditions:—

The student will be required to submit to the Board a report on some particular aspect of elementary education in the foreign country.

This report should embody the results of the student's own direct consideration of the subject, which should always be chosen so that a direct observation can be made by the student; and, if possible, it should include one or two aspects of the foreign practice of elementary education, which are not commonly evident in English practice. With this end in view a considerable proportion of the teacher's available time should be devoted to observing methods actually used in Elementary Schools other than those attached to the Training College.

The teacher will take part in such portions of the curriculum of the foreign Training College as are approved by the Board in each case.

6. In the month of July, at the conclusion of the year spent abroad, candidates will be required to present themselves at the Office of the Board to undergo such test as the Board may think proper to apply.

TRAINING STUDENTS ABROAD—(continued).

order to satisfy themselves that the students' time has been profitably spent.

7. The student will as a rule be attached to some foreign Training College and should be introduced to some person of recognised standing in the place selected, to whom reference can be made in case of difficulty.

8. As a rule only one student at a time should be sent to a place, but this condition may be relaxed in the case of Jena. The student should not change his place of residence without having first secured the Board's approval.

9. In the case of women students proposing to enter as candidates for appointments as *répétitrices*, it is necessary that application should reach the Board of Education early in March. Entry forms may be obtained from the Board of Education, Whitehall, London, S.W.

No Third Year Student may accept a post as *répétitrice*, unless the Training College to which she is to be attached is approved by the Board.

10. Principals of Training Colleges desiring information and advice as to the selection of places abroad should apply to the Director of Special Inquiries and Reports, Board of Education, Whitehall, London, S.W.

The name of the Training College to which each student will be attached will be communicated to him after the interview referred to in paragraph 4 above. In making application, students may express a preference for a particular place of study, and as far as possible their wishes will be regarded.

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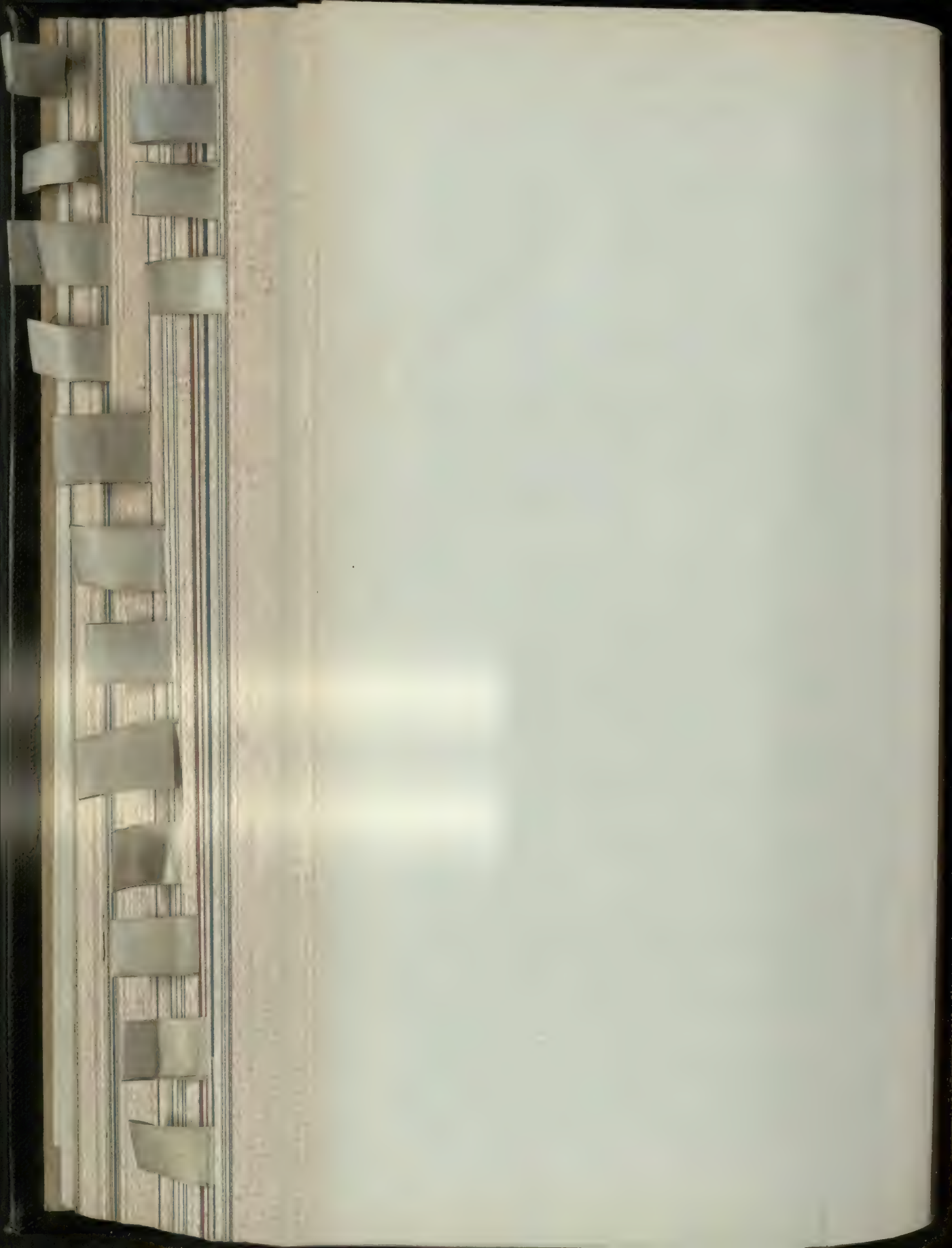
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FOR THE
TRAINING OF TEACHERS
FOR
ELEMENTARY SCHOOLS.

(In force from 1st August 1913.)

Presented to both Houses of Parliament by Command of His Majesty.



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BOARD OF EDUCATION.

MINUTE

OF THE

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Dated July 4th, 1913,

Modifying the Regulations for Public
Elementary Schools, 1912, in England and
Wales.

Presented to Parliament by Command of His Majesty.



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BOARD OF EDUCATION.

MINUTE of the BOARD of EDUCATION, dated July 4th, 1913.

The Regulations for Public Elementary Schools both in England and in Wales, which came into operation on 1st August, 1912, are hereby modified as follows:

(1) The following Article is added after Article 31:—

Special Grants in respect of Educational Experiments.

“31.* The Board will make special grants towards defraying expenditure incurred by Local Education Authorities with the approval of the Board upon educational experiments directed to the improvement of the education of scholars in Public Elementary Schools. The total amount available for these special grants is limited.”

(2) The following words are added to Schedule I. A. 2 (i):—

“or in the case of Training Colleges admitting students from some date other than 1st of August, from such date as may be determined by the Board.”

(3) Schedule II is modified and reads as follows, the alterations being indicated by italics:—

SCHEDULE II.

Regulations for the Employment of Teachers undergoing Preliminary Education.

A.

STUDENT-TEACHERS.

1. A Local Education Authority, which has brought into operation a Scheme approved by the Board for the supervision and training of Student-Teachers and for such continuance of their general education as may be possible in the circumstances, may recommend a Student-Teacher for approval by the Board as part of the Staff of a Public Elementary School subject to the conditions specified in Articles 36 to 42 of the Regulations for the Preliminary Education of Elementary School Teachers.

The recognition of a Student-Teacher will be for one year, but may be continued for a second year with the approval of the Board.

2-(i) Subject to the exception provided for in paragraph 2 (ii), the candidate must have passed an examination accepted by the Board as a qualification for admission to a Training College, and must satisfy the following further conditions:—

- (a) He must have been in receipt of continuous instruction for not less than three years at a School which is on the list of Secondary Schools recognised as efficient.
- (b) He must be suitable in respect of character, health, and freedom from personal defects to become a Student-Teacher.
- (c) He must be over 17 years of age.
- (d) He must have produced a Certificate signed by the Head Master or Mistress of the Secondary School that he is in character and ability a fit and proper person to be a teacher in an Elementary School.
- (e) He must have made a declaration that he desires to become an Elementary School Teacher.

(ii) The Board may recognise as a Student-Teacher a candidate who has passed as a whole one of the examinations qualifying for admission to a Training College, but has not passed in all the required subjects, if they are satisfied that the candidate may reasonably be expected to complete his qualification for admission to a Training College before the end of the year for which he is recognised as a Student-Teacher, and that facilities will be afforded him for the continuance of his general education so far as may be needed for this purpose.

3. Student-Teachers may either (a) be employed as part of the staff of the Public Elementary Schools selected with the approval of the Board as suitable for the purpose, or (b) be allowed to attend such schools in accordance with Article 54 (a) of the Code.

4. The Student-Teacher must attend the Elementary School in accordance with the provisions of the scheme approved for the area by the Board. The Head Teacher of the school must keep registers showing the time spent by the Student-Teacher in the school and full records of the manner in which it was employed.

5. In addition to the practical training and experience which they obtain in the Elementary School, Student-Teachers must obtain such further general education as may be available, to the satisfaction of the Board. Their course of study and training must be properly supervised in accordance with the scheme approved for the area by the Board.

6. Except as provided by paragraph 2 (ii) above, Student-Teachers are not permitted to enter for any examination during the year of Student-Teachership, without the express approval of the Board obtained beforehand.

7. The recognition of a Student-Teacher may be withdrawn at any time by the Board if any of the conditions on which he was recognised cease to be fulfilled, or if the Board are satisfied that he is not receiving training in accordance with the approved scheme, or if the requirements of the Regulations are not observed in his case, or if an Inspector of the Board reports unfavourably on his suitability for the teaching profession.

B.

PUPIL-TEACHERS.

1. Boys and girls who are receiving training in teaching in Public Elementary Schools together with instruction accepted by the Board, may be recognised as Pupil-Teachers subject to the conditions stated in the

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Regulations for the Preliminary Education of Elementary School Teachers, or, as regards Schools in Jersey, subject to conditions specially approved by the Board.

2. *Pupil-Teachers may be recognised for one, two, three or four years according to age, but recognition for more than two years can only be given in suitable Country Schools.*

3. *A Pupil-Teacher must attend a Public Elementary School for employment or training according to a plan drawn up by the Local Education Authority and approved by the Board. The plan must provide for his employment or training during not more than one half and not less than a quarter of the total number of the meetings of the School during the period of his recognition after the age of 15. The plan need not require a Pupil-Teacher under the age of 15 to attend for employment or training at all, but may allow him instead to devote all his time to receiving instruction.*

4. The conditions of employment of every Pupil-Teacher must be such as to ensure that he shall have either two half-days or one whole day in each week free from employment or other requirement, in addition to the time set apart for his instruction.

5. Every Pupil-Teacher must be either in employment and training in a Public Elementary School or in receipt of instruction accepted by the Board under the Regulations for the Preliminary Education of Elementary School Teachers throughout the whole of each year of his recognition, with the exception of ordinary holidays. In the event of the closure of the Public Elementary School or place of instruction through unavoidable cause, provisional arrangements must be made for the employment of the Pupil-Teacher's time after consultation with an Inspector of the Board.

6. In any case in which, owing to a change of residence of a parent or guardian or for any other sufficient reason, it becomes necessary to arrange for the transfer of a Pupil-Teacher during the period of his recognition by the Board to employment in another Elementary School or instruction in another Pupil-Teacher Centre, whether within the area of the same or that of another Local Education Authority a notification of the transfer must be sent to the Board in a form prescribed by them; and it will be a condition of continued recognition that provision shall have been made for the instruction and employment or training of the Pupil-Teacher to proceed without breach of continuity.

7. In calculating the number of meetings during which a Pupil-Teacher has been employed or trained in Public Elementary Schools, every meeting during any part of which he has been so employed or trained must be counted as a meeting.

8. No Pupil-Teacher may be employed or trained in any school which is not selected by an Inspector of the Board as suitable for the purpose of training Pupil-Teachers.

9. Not more than four Pupil-Teachers in all may as a rule be employed in any department, but a larger number recommended by the Inspector may be employed in any case where the Board are satisfied that the department is specially adapted for the purpose of training Pupil-Teachers.

10. Pupil-Teachers must be trained under the supervision of the Head Teacher of the School in which they are employed, and the Head Teacher must keep registers showing the time spent by each Pupil-Teacher in employment or training and full records of the nature of the employment and training. These registers must be verified from time to time by the Managers of the School.

11. Girls may not be employed, except with the special consent of the Board, as Pupil-Teachers in a boys' school, or boys in a girls' or infants' school.

12. The recognition of a Pupil-Teacher may be withdrawn at any time by the Board if any of the conditions on which he was recognised cease to be fulfilled, or if the Board are satisfied that he is not receiving instruction or training in teaching such as they can accept under the Regulations for the Preliminary Education of Elementary School Teachers, or if an Inspector of the Board reports unfavourably on his suitability for the teaching profession.

The provisions of this minute, which supersedes that of the 26th June, 1913, will come into operation on 4th August, 1913.

Given under the Seal of Office of the Board of Education on Friday, 4th July, Nineteen hundred and thirteen, and presented to Parliament pursuant to the 97th Section of the Elementary Education Act, 1870, to lie on the Tables of both Houses for one month.

L. A. SELBY-BIGGE.

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BOARD OF EDUCATION.

MINUTE

OF THE

BOARD OF EDUCATION,

Dated June 24th, 1914,

Modifying the Regulations for Public
Elementary Schools, 1912, in England and
Wales, as already modified by the Minute
dated July 4th, 1913.

Presented to Parliament by Command of His Majesty.



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BOARD OF EDUCATION.

MINUTE of the BOARD of EDUCATION, dated June 24th, 1914.

The Regulations for Public Elementary Schools both in England and in Wales, which came into operation on 1st August, 1912, and were modified by the Minute dated 4th July, 1913, are hereby further modified as follows :

- (1) The following words are omitted from Article 9 (e) :—
“an Uncertificated Teacher or”; and the following paragraph is added to the Article :—
“Where an Uncertificated Teacher was accepted as a Head Teacher of a school or department before 1st August, 1914, the Board may for the present continue to accept him as Head Teacher of that school or department provided that the conditions stated in this Article are satisfied.”
- (2) For Article 9 (f) the following Article is substituted :—
“9 (f). Further exceptions may be made to this Article in cases where there is extraordinary difficulty in obtaining a Head Teacher qualified under this Article or in providing for the attendance of Scholars from remote places at a School having a Head Teacher qualified under this Article.”
- (3) In the last paragraph of Article 10 “70” is substituted for “80.”
- (4) In Article 33 after the words “longer or shorter than a School Year” the following words are inserted :—
“or if school meetings are held only during a certain period of the year under Article 45 (d).”
- (5) The following paragraph is substituted for Article 11 (h) :—
“(h) Any period during the school hours occupied by the medical inspection of scholars who are not excluded from School under Article 53 (b), provided that such inspection is conducted under the authority of the Local Education Authority under Section 13 (1) (b) of the Education (Administrative Provisions) Act, 1907, in the school premises or (in special circumstances) in some other place appointed for the purpose by the Local Education Authority with the approval of the Board.”

(6) The following paragraph is added to Article 44 :—

“(i) Any period during the school hours occupied by the medical treatment of scholars who are not excluded from School under Article 53 (b), provided that such treatment is given under the authority of the Local Education Authority and under the supervision of their School Medical Officer in a place approved by the Board, and in accordance with arrangements sanctioned by the Board under Section 13(1) (b) of the Education (Administrative Provisions) Act, 1907.

Any place approved for the purposes of Article 44(h) or (i) shall be termed an ‘approved place.’”

(7) The following paragraph is added to Article 45 :—

“(d) Exceptions may be made to this Article with the previous consent of the Board in schools where owing to extraordinary difficulties school meetings can be held only during a certain period of the year, and the Board may attach such conditions to their consent as they think fit.”

(8) For Article 58 (b) the following Article is substituted :—

“58 (b). The Board must be satisfied that provision has been made for the Medical Inspection of all children admitted to the School in the year *ending on the 31st March, and of all children between 12 and 13 years of age, together with children over 13 years of age who have not already been examined after reaching the age of 12. For the year beginning on the 1st April, 1915, and subsequent years the Board will also require to be satisfied that provision has been made for the Medical Inspection of all children between 8 and 9 years of age.*”

(9) In Schedule I. A. 3 (i) the words after “temporarily Certificated Teachers for” are omitted and the following words are substituted :—

“two years and six months after leaving the Training College.”

(10) Schedule I. C. 2. (ii) is modified and reads as follows :—

“2. (ii) A person who has been a Bursar will not, as a rule, be recognised by the Board as an Uncertificated Teacher even if he is above the age of 18 and has passed an Examination qualifying him for recognition as an Uncertificated Teacher, unless he has either been for at least a year in a Training College, or a Training School of Domestic Subjects, or been employed or trained for a year as a Student-Teacher.”

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(11) Schedule I. D. 4. is modified and reads as follows:—

“4. A woman recognised as a Supplementary Teacher is only allowed to teach either—

- (i) an Infants' class in a *rural* school or department; or
- (ii) if the average attendance in the school does not exceed 100 the lowest class of older scholars in a *rural* school or department.

For the purpose of this provision children attending separate schools for boys or girls or infants in the same neighbourhood will ordinarily be counted as attending a single school; and an Infants' class is a class in which the majority of the scholars are under 8 years of age.

Provided that—

(a) *A supplementary Teacher recognised in an Infants' class in an urban school on 31st July, 1914, may for the present continue to be employed in an Infants' class in the same school or department, and that*

(b) *A Supplementary Teacher recognised in a school or department for older children on 31st July, 1909, may continue to be employed in that school or department until 31st July, 1919.”*

(12) Schedule II. (A) 2. (i) (a) and 5 are modified and read as follows:—

“2. (i) (a) He must have been receiving continuous instruction for not less than 3 years in an efficient Secondary School or Schools.

5. In addition to the practical training and experience which they obtain in the Elementary School Student-Teachers must obtain such further general education *as is provided for in the scheme approved for the area by the Board.* Their course of study and training must be properly supervised in accordance with the scheme.”

(13) Schedule II. (B) 3 and 5 are modified and read as follows:—

“3. A Pupil-Teacher must attend a Public Elementary School for employment or training *in the art of teaching*, according to a plan approved by the Board. The plan must provide for the employment or training of the Pupil-Teacher during not more than half and not less than a quarter of the meetings of the Public Elementary School *throughout the period for which the Pupil-Teacher is recognised, except the first year where the period of recognition is four years; during that year the plan need not provide for any employment or training in teaching.*

5. Every Pupil-Teacher must be either in employment or training in a Public Elementary School or in receipt of instruction accepted by the Board under the Regulations for the Preliminary Education of Elementary School Teachers throughout the whole of each year of his recognition, with the exception of ordinary holidays. In the event of the closure of the Public Elementary School or place of instruction through unavoidable cause *for more than a fortnight*, provisional arrangements must be made for the employment of the Pupil-Teacher's time after consultation with an Inspector of the Board.”

(14) The following Article is added after Schedule IV., 23 :---

"Attendances under Article 44 (i).

23*(a). A Special Register must be kept at each "approved place" at which scholars are medically treated under the authority of the Local Education Authority.

(b) The Special Register must show the time at which each scholar entered and left the 'approved place,' the nature of the treatment, and the name of the person responsible for treatment, who must initial the Register on each day on which scholars are in attendance at the 'approved place.'

(c) Any scholar marked absent at any meeting of the School who is found on examination of the Special Register kept at an 'approved place' to have spent so much time in attending the 'approved place' as in itself or with the addition of the time spent in secular instruction at the School would make up the minimum period required for an attendance under Article 43 (b) may have the letter T entered inside the mark of absence, thus (T), and an attendance in respect of that period may be reckoned.

All attendances so registered should be added to the total attendances of each child concerned at some time not later than the end of the school year."

The provisions of this Minute will come into operation on 1st August, 1914.

Given under the Seal of Office of the Board of Education on Wednesday, 24th June, Nineteen hundred and Fourteen, and presented to Parliament pursuant to the 97th Section of the Elementary Education Act, 1870, to lie on the Tables of both Houses for one month.

L. A. SELBY-BIGGE.

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BOARD OF EDUCATION.

MINUTE

OF THE

BOARD OF EDUCATION,

Dated November 25th, 1914,

Modifying the Regulations for Public Elementary Schools, 1912, in England and Wales, as already modified by the Minutes dated July 4th, 1913, and June 24th, 1914.

Presented to Parliament by Command of His Majesty.



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BOARD OF EDUCATION.

MINUTE of the BOARD of EDUCATION, dated November 25th, 1914.

The Regulations for Public Elementary Schools both in England and in Wales, which came into operation on 1st August, 1912, and were modified by the Minutes dated 4th July, 1913, and 24th June, 1914, are hereby further modified as follows:—

The following Article is added after Article 30 :—

“ 30^a. Where the Board are satisfied that, owing to the occupation of school-buildings for military purposes, or to other exceptional circumstances directly arising out of the war, the provisions of the Code of Regulations for Public Elementary Schools (and in particular of Articles 43(b) and 45 of the Code) cannot reasonably be observed in the case of any school, the Board may approve special arrangements for the instruction of children attending the school and for registering their attendances, and may pay the grant in respect of the school (either in full or in part as they think reasonable, regard being had to all the circumstances of the case) as if those arrangements were authorised by the Code.”

Given under the Seal of Office of the Board of Education on Wednesday, 25th November, Nineteen hundred and Fourteen, and presented to Parliament pursuant to the 97th Section of the Elementary Education Act, 1870, to lie on the Tables of both Houses for one month.

L. A. SELBY-BIGGE.

(L.S.)

1912.

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FOR

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(including Wales and Monmouthshire),

WITH

SCHEDULES.

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- Statistics of Public Education in England and Wales:—
- Part I. Educational Statistics, 1909-10. [Cd. 5343.] Price 2s. 6d.; by post, 3s. 10d.
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- Directory showing Elementary and Secondary Schools, &c., in Wales. Price 6d.; by post, 7d.
- Special Reports on Educational Subjects—Vols. 2, 4, 5, 7 to 24.
- [A fully detailed list of these Reports may be obtained on application to "The Director of Special Inquiries and Reports, Board of Education, Whitehall, London, W." Letters of application so addressed need not be stamped.]
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- Circular respecting preceding (Circular 792). Price 1d.; by post, 1½d.
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- Memorandum on Medical Inspection of Children in Public Elementary Schools. [Circular 576.] Price 2d.; by post, 2½d.
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- Education Authority's Report, &c. [Circular 596.] Price 1d.; by post, 1½d.
- Syllabus of Physical Exercises for Schools. Price 9d.; by post, 1s.

Elementary.

- Code of Regulations for Public Elementary Schools with Schedules. England and Wales, 1909. [Cd. 4743.] Price 3d.; by post, 4d.
- Modifying Minute of 25th June 1910. [Cd. 5231.] Price 1d.; by post, 1½d.
- Modifying Minute of 13th June 1911. [Cd. 5725.] Price 1d.; by post, 1½d.
- Modifying Minute of 28th February 1912. [Cd. 6008.] Price 1d.; by post, 1½d.
- List of Public Elementary Schools, &c., in England. [List 21.] Price 2s. 6d.; by post, 3s. 10d.
- Building Regulations. England [Cd. 3571.] Price 2d.; by post, 2½d.; Wales [Cd. 3572.] Price 2d.; by post, 2½d.
- Report and Abstract of Evidence: Departmental Committee on Cost of School Buildings, 1911. [Cd. 5534.] Price 6d.; by post, 8d.
- Regulations applicable to Schools for Blind, Deaf, Defective, and Epileptic Children. [Cd. 4789.] Price 2½d.; by post, 3½d.
- Modifying Minute of 27th June 1910. [Cd. 5232.] Price 1d.; by post, 1½d.
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- Regulations and Conditions respecting Certified Efficient Schools. [Cd. 3984.] Price of either, 1d.; by post, 1½d.
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- Abstract of School Attendance By-Laws, 1910. Price 6d.; by post, 6½d.
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- Elementary School Teachers Superannuation Act, 1898, Rules of 1899, 1901, and 1911, Annuity Tables, explanatory Memorandum and Circular 562. Price 3d.; by post, 4d.
- Suggestions for the Consideration of Teachers and others concerned in the Education of Public Elementary Schools. Price 6d.; by post, 8d. [Includes following forms issued separately:—
- Revised Edition—Instalment No. 1, Teaching of Needlework [Circular 745] No. 2, Teaching of Gardening [Circular 746]. Price 1d. each; by post, 1½d.]
- Syllabus of Lessons on "Temperance" for Children attending Public Elementary Schools. [Also Welsh translation.] Price of either, 2d.; by post, 2½d.
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- Reports on Elementary Schools, 1852-1882, by Matthew Arnold. Price 6d.; by post, 7d.
- Report upon the Educational Work in Poor Law Schools, &c. Price 6d.; by post, 7d.

Code of Regulations for Public Elementary Schools, 1912.

Since the issue of these Regulations the following modifications have been made by Minutes of the Board of Education dated July 4th, 1913, and June 24th, 1914, respectively.

Alterations in Articles, 1913.

- (1) The following Article is added after Article 31 :—

Special Grants in respect of Educational Experiments.

"31.* The Board will make special grants towards defraying expenditure incurred by Local Education Authorities with the approval of the Board upon educational experiments directed to the improvement of the education of scholars in Public Elementary Schools. The total amount available for these special grants is limited."

Alterations in Articles, 1914.

- (2) The following words are omitted from Article 9 (e) :—

"an Uncertificated Teacher or"; and the following paragraph is added to the Article :—

"Where an Uncertificated Teacher was accepted as a Head Teacher of a school or department before 1st August, 1914, the Board may for the present continue to accept him as Head Teacher of that school or department provided that the conditions stated in this Article are satisfied."

- (3) For Article 9 (f) the following Article is substituted :—

"9 (f). Further exceptions may be made to this Article in cases where there is extraordinary difficulty in obtaining a Head Teacher qualified under this Article or in providing for the attendance of Scholars from remote places at a School having a Head Teacher qualified under this Article."

- (4) In the last paragraph of Article 10 "70" is substituted for "80."

- (5) In Article 33 after the words "longer or shorter than a School Year" the following words are inserted :—

"or if school meetings are held only during a certain period of the year under Article 45 (d)."

- (6) The following paragraph is substituted for Article 4 (h) :—

"(h) Any period during the school hours occupied by the medical inspection of scholars who are not excluded from School under Article 53 (b), provided that such inspection is conducted under the authority of the Local Education Authority under Section

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13(1)(b) of the Education (Administrative Provisions) Act, 1907, in the school premises or (in special circumstances) in some other place appointed for the purpose by the Local Education Authority with the approval of the Board."

(7) The following paragraph is added to Article 44 :—

"(i) Any period during the school hours occupied by the medical treatment of scholars who are not excluded from School under Article 53 (b), provided that such treatment is given under the authority of the Local Education Authority and under the supervision of their School Medical Officer in a place approved by the Board, and in accordance with arrangements sanctioned by the Board under Section 13(1) (b) of the Education (Administrative Provisions) Act, 1907.

Any place approved for the purposes of Article 44 (i) or (b) shall be termed an 'approved place.'"

(8) The following paragraph is added to Article 45 :

"(d) Exceptions may be made to this Article with the previous consent of the Board in schools where owing to extraordinary difficulties school meetings can be held only during a certain period of the year, and the Board may attach such conditions to their consent as they think fit."

(9) For Article 58 (b) the following Article is substituted :—

"58 (b). The Board must be satisfied that provision has been made for the Medical Inspection of all children admitted to the School in the year ending on the 31st March, and of all children between 12 and 13 years of age, together with children over 12 years of age who have not already been examined after reaching the age of 12. For the year beginning on the 1st April, 1945, and subsequent years the Board will also require to be satisfied that provision has been made for the Medical Inspection of all children between 8 and 9 years of age."

Alterations in Schedules.

(10) Schedule I. D. 4. is modified and reads as follows :—

"4. A woman recognised as a Supplementary Teacher is only allowed to teach either—

- (i) an Infants' class in a rural school or department; or
- (ii) if the average attendance in the school does not exceed 100 the lowest class of older scholars in a rural school or department.

For the purpose of this provision children attending separate schools for boys or girls or infants in the same neighbourhood will ordinarily be counted as attending a single school; and an Infants' class is a class in which the majority of the scholars are under 8 years of age.

Provided that—

(a) *A supplementary Teacher recognised in an Infants' class in an urban school on 31st July, 1914, may for the present continue to be employed in an Infants' class in the same school or department, and that*

(b) *A Supplementary Teacher recognised in a school or department for older children on 31st July, 1909, may continue to be employed in that school or department until 31st July, 1919."*

(11) Other alterations are made in Schedules I., II., and IV.—

These alterations are given in full in the Minutes [C'd. 6891+ of 1913] and [C'd. 7484 of 1911], copies of which can be obtained price $\frac{1}{2}d.$ each, by post 1d. each) from the Sale Agents mentioned on the cover.

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BOARD OF EDUCATION.

1912.

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(Excluding Wales and Monmouthshire),

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PREFATORY NOTE.

AN interval of three years has elapsed since the Code of Regulations for Public Elementary Schools was last revised as a whole. The Code of 1912 incorporates the changes made by the Minutes dated June 25th, 1910, June 13th, 1911, and February 28th, 1912, of which Circulars 747, 772, 780 and 790 are explanatory. Certain additional modifications of the Code of 1909 have now been made; and the more important of these are described in Circular 800.

A Key to the modifications of the Code of 1909 is given on page 53 of this volume; and alterations of wording, other than omissions, are indicated in italics as far as possible.

With reference to paragraph 9 of Circular 709 and to Article 9 (a) (iii) of the Code, the Board consider it desirable to state that they do not contemplate the alteration of that Article so as to disqualify for the post of Head Teacher any Teacher who was certificated before the 1st August 1910, on the ground that such Teacher had not completed satisfactorily a course of training.

L. A. Selby-Bigge

20th June, 1912.

THE CODE FOR 1912.

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INTRODUCTION.

The purpose of the Public Elementary School is to form and strengthen the character and to develop the intelligence of the children entrusted to it, and to make the best use of the school years available, in assisting both girls and boys, according to their different needs, to fit themselves, practically as well as intellectually, for the work of life.

With this purpose in view it will be the aim of the School to train the children carefully in habits of observation and clear reasoning, so that they may gain an intelligent acquaintance with some of the facts and laws of nature; to arouse in them a living interest in the ideals and achievements of mankind, and to bring them to some familiarity with the literature and history of their own country; to give them some power over language as an instrument of thought and expression, and, while making them conscious of the limitations of their knowledge, to develop in them such a taste for good reading and thoughtful study as will enable them to increase that knowledge in after years by their own efforts.

The School must at the same time encourage to the utmost the children's natural activities of hand and eye by suitable forms of practical work and manual instruction; and afford them every opportunity for the healthy development of their bodies, not only by training them in appropriate physical exercises and encouraging them in organised games, but also by instructing them in the working of some of the simpler laws of health.

It will be an important though subsidiary object of the School to discover individual children who show promise of exceptional capacity, and to develop their special gifts (so far as this can be done without sacrificing the interests of the majority of the children), so that they may be qualified to pass at the proper age into Secondary Schools, and be able to derive the maximum of benefit from the education there offered them.

And, though their opportunities are but brief, the teachers can yet do much to lay the foundations of conduct. They can endeavour, by example and influence, aided by the sense of discipline which should pervade the School to implant in the children habits of industry, self-control, and courageous perseverance in the face of difficulties; they can teach them to reverence what is noble, to be ready for self-sacrifice, and to strive their utmost after purity and truth; they can foster a strong sense of duty, and instil in them that consideration and respect for others which must be the foundation of unselfishness and the true basis of all good manners; while the corporate life of the School, especially in the playground, should develop that instinct for fair-play and for loyalty to one another which is the germ of a wider sense of honour in later life.

In all these endeavours the School should enlist, as far as possible, the interest and co-operation of the parents and the home in an united effort to enable the children not merely to reach their full development as individuals, but also to become upright and useful members of the community in which they live, and worthy sons and daughters of the country to which they belong.

CHAPTER I.

THE CURRICULUM, SYLLABUS, AND TIME TABLE.

Infants.

1. The principal aim of the school in relation to infants should be to provide opportunities for the free development of their bodies and minds, and for the formation of habits of obedience and attention.

- (a) Physical exercises should take the form of games involving free movement, singing and breathing exercises, rather than of set drill.
- (b) The younger infants should be encouraged to employ their eyes, hands, and fingers in suitable free occupations, and the teacher, by talking with the children, by encouraging them to talk to her and to ask questions, and by telling stories to them, should lead them to form ideas, and to express them in simple language of their own.
- (c) For the older infants the above exercises should be supplemented by short lessons, in which the children are trained to listen carefully, to speak clearly, to recite easy pieces, to reproduce simple stories and narratives, to cultivate their powers of observation, to do simple things with their hands, to begin to draw, to begin to read and write, to acquire an elementary knowledge of number, to practise suitable songs, and to sing simple musical intervals.
- (d) Instruction in sewing and knitting may be given to the older infants, but care must be taken to avoid fine work and injury to eyesight.

Older Scholars.

2. In schools for older scholars the subjects described below should be taught in a manner suitable to the age and capacity of the several classes. It is not necessary that all the subjects should be taught in every school or class, and the curriculum as a whole may be varied when the Board are satisfied that its modification is required by the needs of the scholars or the circumstances of the school, or is justified for the purpose of experiment.

- (1) *The English Language*, including practice in speaking with clear enunciation, exercises in continuous oral narration, reading for information both silently and aloud, and written composition. Throughout the course the reading books used by the scholars should include pieces of literary merit, some of which should be learned for recitation. In the higher classes silent reading should be the rule

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rather than the exception, and the scheme of instruction should include a wide course of reading under suitable guidance, with the aim of creating a capacity for systematic study and a taste for good literature. Instruction in grammar should be confined to the higher classes. If given, it should be directed to enabling the scholars to understand the structure of the sentences which they speak, read, or write, and the functions of the several words in those sentences, and should be as free as possible from technicalities.

(2) *Handwriting*, which should be taught so as to secure speed as well as legibility.

(3) *Arithmetic*, including practical work in measuring and weighing, oral exercises, written exercises (which should be of a varied character, and should not infrequently involve the application of more than one arithmetical operation) and, in the higher classes, practice in explaining the processes used. The principles and advantages of a decimal system of weights and measures should be explained to the older scholars; and the use of literal symbols in working simple problems may with advantage be taught in the higher classes.

Practical instruction should be given in mensuration, and should include drawing to scale; the older boys should learn the use of compasses and protractor; and such practical instruction should be correlated as far as possible with handwork.

(4) *Drawing* (including modelling), directed in the first instance to the cultivation of the scholar's individual faculties of observation and expression, and leading not only to manual dexterity and accuracy, but also to the development of intelligence. From the commencement the scholar should practise the direct representation (at sight and from memory) of actual objects, natural and artificial, proceeding from simple to complex forms, avoiding the use of flat copies and using the methods and materials (especially water colours and the brush) which are most appropriate to each stage and best adapted to sustain his interest and pleasure in the work. Drawing should be correlated as far as possible with other studies and other forms of hand and eye training.

(5) *Observation Lessons and Nature Study*, which should have special reference to the surroundings of the scholars, the natural and historical features and plant life of the locality, and the industries of the inhabitants, with the view of forming the habit of intelligent and accurate observation. In schools in or near the country nature study may be connected with the teaching of gardening

to the older scholars, if adequate equipment and efficient teachers are available.

- (6) *Geography*, based upon elementary notions acquired through observation lessons, nature study, and descriptive lessons, and leading to a general knowledge of the Earth and its peoples, and a more detailed knowledge of the British Isles and the British Dominions beyond the seas. Where possible, the geography of the chief foreign countries should also be taught in some detail. The scholars should learn to use good maps, to make their own simple sketch maps, and in the higher classes to draw maps to scale.
- (7) *History*, which should include, in the lower classes, the lives of great men and women and the lessons to be learnt therefrom, and in the higher classes a knowledge of the great persons and events of English History and of the growth of the British Empire. The teaching need not be limited to English or British History, and lessons on citizenship may be given with advantage in the higher classes.
- (8) *Singing*, which should include voice training, breathing exercises, practice in class singing, the reading of music at sight (which, except in special circumstances, should not be restricted to the tonic sol-fa notation) and a training in elementary musical knowledge. National and Folk songs should be freely used throughout the school.
- (9) *Hygiene and Physical Training*, including exercises in proper breathing; instruction adapted to the ages and sexes of the scholars in the elementary rules of personal health, particularly in respect of food, drink (including alcohol),* clothing, cleanliness, and fresh air; and careful cultivation of a correct posture at writing and other lessons. In any course of Physical Exercises the general physical development of the scholars should be aimed at, and the official syllabus of physical training should be followed. The scholars of any school not situated wholly on a ground floor should be practised in fire-drill. Instruction and practice in Swimming may also be included in the Time Table.
- (10) *Domestic Subjects* (for girls only), including the proper performance of ordinary domestic duties, together with instruction in Needlework and Knitting. The older girls should receive a practical training in Cookery, Laundry-work, and Housewifery, except where circumstances render this impossible.

* Lessons on "Temperance," where given, should be in conformity with the Official Syllabus dated 1st June 1909.

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Needlework should be so taught as to secure a practical knowledge of sewing, cutting-out, and making ordinary garments, together with mending and darning. Exercises on small pieces of material should be used only for learning different kinds of stitches. In all classes the periodical construction and completion of some useful garment by each scholar should be aimed at, and the older girls may be taught the use and care of the sewing machine with advantage. At the same time, the educational value of Needlework as a form of hand and eye training must be kept in view as well as its practical value.

Special care should be taken to avoid all conditions unfavourable to eyesight.

The teaching should afford frequent opportunities for the practice of oral and written composition, and so far as possible all subjects should be taught in relation to each other, and with reference to the surroundings of the children. Those operations and things with which the people are concerned in their daily occupations should furnish some of the subjects of arithmetical problems, observation lessons, nature study, and drawing lessons. It must also be remembered that handwork properly correlated with the other subjects of instruction not only gives concreteness to the school work and develops the constructive and mechanical faculties of the scholars, but also tends to stimulate their general intelligence.

Moral Instruction should form an important part of the curriculum of every elementary school. Such instruction may either (i) be incidental, occasional, and given as fitting opportunity arises in the ordinary routine of lessons, or (ii) be given systematically and as a course of graduated instruction.

The instruction should be specially directed to the inculcation of courage; truthfulness; cleanliness of mind, body, and speech; the love of fair-play; consideration and respect for others; gentleness to the weaker; kindness to animals; self-control and temperance; self-denial; love of one's country; and appreciation of beauty in nature and in art.

The teaching should be brought home to the children by reference to their actual surroundings in town or country, and should be illustrated as vividly as possible by stories, poems, quotations, proverbs, and examples drawn from history and biography.

The object of such instruction being the formation of character and habits of life and thought, an appeal should be made to the feelings and the personalities of the children. Unless the natural moral responsiveness of the child is stirred, no moral instruction is likely to be fruitful.

The Syllabus.

3. The teaching given in every school should be in accordance with a syllabus framed with special regard to the circumstances of the school, so as to provide an organised curriculum throughout the classes.

- (a) The syllabus should be arranged with reference to the classification of the scholars, which should be revised either annually or at shorter intervals. The times of re-classification need not depend upon the date of the school year (*Article 28 (a)*).
- (b) The Board of Education, or the Inspector who visits the school, may require any syllabus to be submitted for approval. The Board may require the modification of any syllabus which is unsuitable.
- (c) The Inspector may, where necessary, require brief notes to be produced, or such other evidence as will show that the lessons have been duly prepared.

4. The Board will be prepared to approve a special syllabus where good reason can be shown for a considerable departure from the course of instruction ordinarily followed in a Public Elementary School. For example :—

- (a) In a country school the Board will be prepared to approve a syllabus in which the teaching of arithmetic, history, and geography is of a character less advanced than is usual, provided that the time so saved is devoted to nature study and practical subjects suitable for country children.
 - (b) In some town schools the Board will be prepared to approve a syllabus in which the teaching of the subjects named in Article 2 is of a less advanced character than usual, provided that the time so saved is devoted to hand and eye training, including in the case of children over eleven years of age, suitable and practical applications of such training.
5. (a) One or two subjects other than those named in Article 2 may sometimes be taught with advantage to older scholars. The Inspector will satisfy himself (1) that any subject thus taken is suitable to the age, circumstances, and capacities of those scholars who take it; (2) that it can be taken without interfering with the general course of instruction; (3) that it can be efficiently taught; (4) that the instruction will be given in accordance with a suitably graduated scheme; and (5) that, in the case of children not likely to be transferred to schools of a higher grade, the teaching is carried far enough to be of value to the scholars after leaving school.

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- (b) Except with the consent of the Inspector, the syllabus must not be modified with a view to the preparation of scholars for any examination. This consent will be given only if the Inspector is satisfied that the modified course of instruction fulfils the conditions laid down in the preceding paragraph for teaching extra subjects, and that it is suitable in itself to the scholars concerned, irrespective of the requirements of the examination.

6. Instruction may be given in religious subjects, but no grant is made in respect of such instruction. (*Section 97 (1), Elementary Education Act, 1870.*)

7. (a) The time of opening and closing the school and the time during which instruction is given in each subject of the school curriculum must be entered in the Time Table; and in cases where any secular or religious instruction, or religious observance taking place during the time set apart for religious instruction, is to take place elsewhere than on the school premises, this must be clearly stated on the Time Table.

- (b) The Time Table, and the curriculum of secular instruction, are subject to the approval of the Board, which will be expressed by the Inspector on behalf of the Board. The approval, on whatever date it may have been given, will continue until it is withdrawn. Minor and temporary modifications in the arrangements for secular instruction need not be notified to the Inspector, but important modifications must not be made without his previous approval, unless they are sanctioned by the Local Education Authority in pursuance of a general arrangement arrived at after consultation with him.

- (c) Every Time Table must be hung up conspicuously in the school, and must bear upon it the Inspector's signature, and either (i) a certificate by the Local Education Authority or one of its officers that it has been approved by the Authority, or, (ii) a certificate by the Managers that to the best of their knowledge it conflicts with no byelaw as to school attendance, or direction as to secular instruction, made or given by the Local Education Authority under the Education Acts, 1870 to 1911.

- (d) In cases where any question is pending between the Managers of a Voluntary School and the Local Education Authority regarding some requirement of the Authority which may affect the Time Table, the Board may accord temporary or provisional approval of the Time Table pending the determination of the question.

- (e) If the parent of any scholar attending the school applies in writing to see the Time Table it must be open to his or her inspection at any reasonable time outside the ordinary school hours.

CHAPTER II.

TEACHING STAFF.

The Head Teacher.

3. Every school or department must have a Head Teacher who should be held responsible for the general control and supervision of the instruction and discipline. Except in special circumstances approved by the Board, the Head Teacher must undertake no outside duties which occupy any part of the school hours.

A school may consist of one or more "departments," and if any question arises whether any part of a school is or is not a department, or whether any department is or is not a separate school, or whether any classes in a school or department are, or are not, equivalent to a school, department, or division formerly recognised for older scholars or infants, as the case may be, it shall be determined for the purposes of this Code by the Board of Education.

9. (a) Subject to the exceptions provided for below, the Head Teacher of every School or Department must satisfy the following conditions :—

- (i) He must be a Certificated Teacher or a Teacher recognised under Schedule I. B.
 - (ii) He must, unless he has obtained his Parchment Certificate under the provisions of the Code for 1906 or previous years, have completed such service as is required for the endorsement of a certificate (*Schedule I.A. 4*).
 - (iii) He must, unless he is recognised by the Board as a Certificated Teacher, or a Teacher qualified under *Schedule I.B.*, as from 1st August, 1910, or some earlier date, have completed satisfactorily a course of training approved by the Board under the Regulations for the Training of Teachers for Elementary Schools.
- (b) A Certificated Teacher, or a Teacher recognised under *Schedule I.B.*, may in special circumstances be accepted by the Board as a Head Teacher although he does not satisfy conditions (ii) or (iii) of Article 9 (a), if he possesses such other special qualifications as the Board can accept as enabling them to dispense with those conditions.

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- (c) Where a Teacher was accepted as a Head Teacher of any School or Department before 1st August, 1909, the Board may continue to accept him as the Head Teacher of that School or Department.
- (d) A Teacher may be accepted as the Head Teacher of a School or Department with an average attendance of not more than 60 scholars although he does not satisfy condition (ii) of Article 9 (a).
- (e) The Board may, for the present, accept an Uncertificated Teacher or a Certificated Teacher who does not satisfy condition (iii) of Article 9 (a) as the Head Teacher of a School or Department with an average attendance of not more than 40 scholars, provided that the Inspector reports (1) that the teacher is specially qualified to take charge of the School or Department in question, and (2) that the School or Department is so circumstanced that it is difficult to obtain a fully qualified Certificated Teacher.
- (f) Further exceptions may be made to this Article in cases where there is extraordinary difficulty in providing for the attendance of scholars from remote places at a school having a Head Teacher qualified under this Article.
- (g) If a School or Department which is already on the Annual Grant List (Article 27) is kept open, and the registers are duly marked, the Grant may be paid without deduction in respect of any period (not being more than three months exclusive of the ordinary school holidays) during which the School or Department was not under the charge of a Head Teacher qualified under this Article. But the Grant will only be paid under this paragraph when the Board consider that there are special circumstances to justify such a course.

The Staff.

10. The school or department must have a sufficient and suitable staff.

The "staff" of a school or department consists, for the purposes of this Code, of all the teachers whose employment as such in the school or department is recognised by the Board (see Articles 11, 12 (c) and 15).

In considering the sufficiency and suitability of the staff of a school or department, the Board will have regard to the circumstances and requirements of the locality and the organisation and co-ordination of the various schools in the area, the arrangement of the premises of the school for teaching purposes, the number of children in attendance, their organisation and proficiency, the nature of the approved course of instruction, the qualification of each member of the staff and his suitability for

the work assigned to him, and the regular absence of any teacher during the school hours for the purpose of receiving professional training or otherwise.

A School or Department will not as a rule be regarded as suitably staffed unless it includes at least one Certificated Teacher (inclusive of the Head Teacher) for every complete group of 80 scholars in average attendance.

11. (a) In order to be recognised on the staff of a school or department, a teacher, other than the Head Teacher, must (with the exceptions named in the following paragraph) be a Certificated Teacher, a person having the status of a Certificated Teacher or an Uncertificated Teacher as defined in Schedule I., or a Student-Teacher as recognised under Article 38 (a) of the Regulations for the Preliminary Education of Elementary School Teachers (*see Schedule II.*).

For the present, Supplementary Teachers and Pupil-Teachers may be recognised on the staff (*see Schedules I. and II.*).

- (b) *Cancelled. See Article 12 (c).*
- (c) No person who is a member of, or is employed otherwise than in teaching by, a Local Education Authority can as a rule be recognised as part of the staff of any school within the area of such Authority (*see also Article 51 (c).*).
- (d) No person who is a clerk in Holy Orders or the regular Minister of a Congregation can be recognised as part of the staff of a school or department for the purposes of this Code.
- (e) It is a condition of the Board's recognition of any person as a teacher that a satisfactory Medical Certificate has been produced by him.

The conditions in this clause do not apply to Pupil-Teachers or Student-Teachers, the conditions of whose recognition are set out in the Regulations for the Preliminary Education of Elementary School Teachers.

When a teacher has once been recognised, a fresh Medical Certificate will not be required by the Board on his removal to the area of another Local Education Authority or to another school.

- (f) A person not recognised on the staff of the school who is employed as attendant or monitor may not be placed in charge or made responsible for the teaching of a class or part of a class. A scholar who is under the legal obligation to attend school must not be employed as a monitor. (*See also Article 43 (e) and Schedule IV. 21.*)
12. (a) In no case will a staff be considered sufficient if, in the aggregate, it is not at least equivalent for the

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average attendance of the school or department, measured by the following scale, viz. :—

Teacher.	Number of Children in Average Attendance.
The Head Teacher	35
Each Assistant Teacher (Certificated or recognised under Schedule I. B)*	60
Each Uncertificated Assistant Teacher*	35
Each Student-Teacher†	20
Each Supplementary Teacher*	20

The above scale must not be understood to indicate that a school thus staffed will necessarily be regarded as complying with the requirements of Article 10. In every case the sufficiency and suitability of the staff will be viewed in the light of the various considerations specified in that Article.

This Article does not apply to Greenwich Hospital or to Marine Schools.

- (b) For the purpose of Article 32 (b) the following scale is substituted for *that* given in (a) above :—

Teacher.	Number of Children in Average Attendance.
The Head Teacher	35
Each Assistant Teacher (Certificated or recognised under Schedule I. B).	40
Each Uncertificated Assistant Teacher	30
Each Student-Teacher	—
Each Supplementary Teacher	20

- (c) Where the Board are satisfied that a vacancy in the office of an assistant teacher on the staff of a school or department cannot be immediately filled by a temporary or permanent teacher qualified under Article 11, a temporary teacher or teachers not so qualified may be recognised for a period not exceeding three months (inclusive of holidays) from the date of the vacancy. Each teacher so recognised will be accepted as equivalent for the purposes of Article 12 (a) and (b) to a Supplementary Teacher.

13. (Cancelled.)

* For particulars see Schedule I., page 30.

† This applies only to Student-Teachers recognised under Article 38 (a) of the Regulations for the Preliminary Education of Elementary School Teachers. For particulars see Schedule II., page 35.

Size of Classes.

14. The number of scholars on the register of any class (*Schedule IV. 12*) or group of classes under the instruction of one teacher must not exceed 60.

For the purposes of this Article four "partial exemption" scholars on the class register will be counted as three, provided that the number of scholars in attendance at one time must not exceed 60.

Conditions of Employment.

15. Teachers must be employed under written agreements, provided that, in the case of a school provided by a Local Education Authority, a teacher may be employed under a minute of the Authority.

(a) Any agreement or minute of appointment dated on or after 1st August, 1904, under which a teacher other than a Pupil-Teacher or Student-Teacher is employed in a Public Elementary School, must include, either expressly or by reference to this Article of the Code, one or other of the alternative Clauses set out below:—

The Board will not recognise, as part of the staff of a school or department, any teacher, other than a Pupil-Teacher or Student-Teacher, unless this condition is complied with.

Clause (1).

The teacher shall not be required to perform any duties except such as are connected with the work of a Public Elementary School, or to abstain outside the school hours from any occupations which do not interfere with the due performance of his duties as teacher of a Public Elementary School

Clause (2).

The teacher shall not be required to perform any duties except such as are connected with the work of a Public Elementary School and with the instruction of Pupil-Teachers, or to abstain outside the school hours from any occupations which do not interfere with the due performance of his duties as teacher of a Public Elementary School or with the instruction of Pupil-Teachers.

(b) Clause (2) must be included only if the teacher is required to instruct Pupil-Teachers who are not receiving instruction in a Centre recognised by the Board. In other cases Clause (1) must be included.

(c) Sub-section (a) of this Article does not apply to Marine Schools or to schools which are attached to institutions in which children are boarded and lodged.

(d) The agreements or minutes under which Pupil-Teachers and Student-Teachers are employed must be in accordance with the Regulations for the Preliminary Education of Elementary School Teachers.

(e) The agreement must not provide that the salary shall be reduced if any deduction is made by the Board from

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the grants paid in respect of the school or department in which the teacher is employed.

Notice of Changes in the Staff.

16. If in the course of a school year the staff of any school or department is changed by the leaving of any teacher, or by the appointment of a new teacher, notice should at once be given to the Board *on the forms provided for the purpose, copies of which may be obtained from the Board on application*

It is important that all cases of summary dismissal should immediately be reported with full particulars to the Board.

In view of the provisions of the Elementary School Teachers (Superannuation) Act, 1898, attention to this Article is specially necessary in the case of Certificated Teachers.

CHAPTER III.

PREMISES, ACCOMMODATION, AND EQUIPMENT.

17. (a) Before recognising newly erected premises as suitable for a Public Elementary School, the Board must be satisfied by the submission of plans, drawn in accordance with the prescribed requirements, that the Building Regulations are complied with.*
- (b) Before recognising enlargements or alterations (other than minor alterations as defined below) of premises which are already recognised, the Board must be satisfied, by the submission of properly drawn plans, that the proposals are satisfactory. In considering the proposals the Board will have regard to the principles stated in the Building Regulations.
- (c) The recognised accommodation, *i.e.* the maximum number of scholars for which the premises are suitable, will be determined by the Board, in the case of new buildings or of alterations or enlargements, from the approved plans.

In the case of alterations to offices or sanitary conveniences the Board may call for further information before approving the proposals. Minor alterations may be made without the submission of plans to the Board, if the approval of the Inspector has been previously obtained by the Local Education Authority, and, in the case of Voluntary Schools, by the Managers. But no alteration of the premises of a school will be regarded as a minor alteration if it affects the area of the rooms used for teaching, or diminishes the light, or if it is proposed to meet the cost out of a loan.

18. The premises of the school must be healthy, safe in case of fire, must have suitable and sufficient sanitary and cloak-room accommodation for the scholars in attendance and for teachers,

* The Building Regulations (Cd. 3571 of 1907) are published separately, and may be obtained, price 2d., by post 2½d., from Messrs. Wyman & Sons, Ltd., Fetter Lane, London, E.C., directly or through any bookseller.

must be adequately lighted, warmed, ventilated, cleaned and drained, must be kept in proper repair, and must be sufficient, convenient, and suitably arranged for the instruction of the children in attendance according to their age.

19. The average number of scholars in attendance must not exceed the recognised accommodation, and no room may be habitually used for a larger number of scholars than that for which it is passed by the Board.

The recognised accommodation of a school or department may from time to time be revised by the Board.

20. The school must be adequately and suitably equipped with the apparatus requisite for its curriculum, including desks, furniture, books, and maps. Provision should be made for securing an adequate supply of suitable books for the course of general reading in the higher classes of the school, and for bringing to the notice of the scholars such agencies as may assist them in the continuation of their studies in after life. Dictionaries and Atlases should be provided for the scholars in the higher classes. In cases where the school does not possess a school library, arrangements should be made to supply books for the reading of the scholars by co-operation with organisations existing for the purpose or otherwise.

CHAPTER IV.

INSPECTION AND REPORTS.

21. Every Public Elementary School is inspected from time to time by the Board. An Inspector may visit at any time any Public Elementary School or place where the scholars of a Public Elementary School are receiving instruction under the Code.

22. A school will not necessarily receive a formal visit of inspection or be made the subject of a detailed report by the Inspector each year, but every school will be so visited and reported upon from time to time. (*See Article 50.*)

23. Any Report on the school sent by the Board to the Local Education Authority, or to the Managers, together with any remarks made thereon by the Board for communication to the Local Education Authority, or to the Managers, must as soon as received be entered in full in the Log Book and signed by the Correspondent.

24. The term "Inspector," where used in this Code, means exclusively one of His Majesty's Inspectors of Schools or any other person employed by the Board for the purpose of inspection.

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CHAPTER V.

EXCHEQUER GRANTS IN AID AND ANNUAL GRANT LIST.

There is annually voted by Parliament, for the purposes of Elementary Education in England and Wales, a sum of money to be administered by the Board of Education, in this Code referred to as the "Board."

From this sum are paid—

- (a) The Aid Grant payable under Section 10 of the Education Act, 1902.
- (b) The Fee Grant payable under the Elementary Education Act, 1891, regulations as to which are given in Schedule V.
- (c) Annual Grants in accordance with Article 31 (a) in respect of ordinary instruction given to children in Public Elementary Schools other than Higher Elementary Schools.
- (d) Special Grants in accordance with Article 32, in respect of schools in areas with small populations, payable under Section 19 (2) of the Elementary Education Act, 1876, and Section 2 of the Education Code (1890) Act, 1890.
- (e) Special Subjects Grants in accordance with Article 34 in respect of special instruction given to children in ordinary Public Elementary Schools other than Higher Elementary Schools.
- (f) Annual Grants in accordance with Article 42 in respect of instruction given to children in Higher Elementary Schools.

Grants are payable to the Local Education Authority by whom the schools are maintained, with the exception that, in the case of a school not maintained by the Local Education Authority, but aided by the Board under Section 15 of the Education Act, 1902, the grants other than the Aid Grant are payable to the Managers.

Grants in respect of schools for Blind, Deaf, Defective, or Epileptic children are payable not under this Code, but under separate regulations.

- 25. (a) A Public Elementary School is a school which is an Elementary School within the meaning of Section 3 of the Elementary Education Act, 1870, and satisfies the further conditions imposed by Section 7 of the same Act.
- (b) Every School or Department must be kept on a satisfactory level of efficiency, having regard to the circumstances and needs of the locality, and to the organisation and co-ordination of the various schools in the area.
- (c) Every School or Department must comply with such conditions, regulations, and requirements imposed by

the Education Acts as are applicable to the type of school in question. Satisfactory provision must be made for the Medical Inspection of children attending the school in accordance with Section 13 (1) (b) of the Education (Administrative Provisions) Act, 1907.

- (d) *So far as Schools in Jersey are concerned, only those provisions of the Education Acts apply which have been made applicable to Jersey by the law of Jersey.*
26. (a) The conditions required to be fulfilled by a school in order to obtain an Annual Grant are those contained in this Code. (*Section 97, Elementary Education Act, 1870.*)
- (b) If any question arises as to the interpretation of this Code, or as to the fulfilment of any of the conditions specified therein, the decision of the Board for the purposes of this Code shall be final.
27. (a) In order that a school or department may be placed on the list of those towards the maintenance of which Annual Grants are made, called the "Annual Grant List," an application must be addressed to the Secretary, Board of Education, Whitehall, London, S.W., and a form of preliminary statement filled up and sent to the Board.
- (b) No school or department will be placed on the Annual Grant List unless the Board are satisfied that it is necessary.
- (c) No Voluntary School will be placed on the Annual Grant List unless due security is given, either by a provision in the Trust Deed, or in such other manner as may be approved by the Board of Education, that the school will not be closed without 18 months' notice having been given to the Local Education Authority and to the Board, and that, if the owners, Trustees, or Managers are unable or unwilling to carry on the School as a Voluntary School until the expiration of the period of notice, they will permit the Local Education Authority to use the Schoolhouse for the whole or the remainder of that period free of charge for the purposes of a school provided by them.
28. (a) The Annual Grants under Articles 31 and 32 are calculated in respect of the period fixed by the Board as the "school year" of the school.
- (b) In the case of a change in the date of the "school year," the period in respect of which the grants are calculated may be less than 12 months, and these grants will be reduced proportionately.

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- c) In the case of a new school, the period in respect of which these grants are calculated will commence on the day from which the school is recognised by the Board as being on the Annual Grant List.
- 29. (a) A school or department of a school will be removed from the Annual Grant List, if it ceases to be necessary, or if it fails to comply with the conditions directly required by the Education Acts to be fulfilled by an Elementary School in order to obtain a Parliamentary Grant.
- (b) A school or a department will, after such warning as shall appear to the Board to be expedient, and subject to Article 30, be removed from the Annual Grant List if it fails to comply with the conditions of this Code.
- 30. (a) Instead of removing a school or department from the Annual Grant List, or as a preliminary step before doing so, the Board may, in the case of a breach of any of the conditions of this Code during any school year, make a deduction from the grant payable in respect either of that or of *any subsequent* school year.
- (b) In the case of a breach of any of the conditions of this Code, the Board may, when there are special circumstances which would justify it, pay the full grant or a portion of it, notwithstanding anything in this Code to the contrary.

Grant on account of Average Attendance.

- 31. (a) Grants will be payable in respect of ordinary instruction given in Public Elementary Schools, other than Higher Elementary Schools, at the following rates:—
 - (i) A grant at the rate of 13s. 4d. for each unit of the average attendance of scholars under five years of age, and 21s. 4d. for each unit of the average attendance of scholars over five years of age.
 - (ii) In respect of each school, for the Infant's Division of which an additional grant of 5s. per unit of average attendance was paid (under Article 31 (a) (ii) of the Code of 1908) for the last school year completed before 1st August, 1909, a grant equal to the total amount of the additional grant so paid.
- (b) For the purposes of this Article the Board may require to be satisfied by such evidence as they think necessary as to the ages of any scholars whose attendances are included in the attendances of scholars over five years of age, and, where they are not so

satisfied as regards any scholar, they may require the attendances of that scholar to be included among those of scholars under five years of age.

Special Grants in respect of Schools in Areas with small Populations.

32. Where the population of the parish in which any Public Elementary School is situate, or the population within two miles, measured according to the nearest road from the school, is less than 500, and there is no other Public Elementary School recognised by the Board as available for the children of that parish, or that population, as the case may be, the Board may make, in addition to all other grants:—(a) a special grant at the rate of £10 a year if the said population is less than 300 and exceeds 200, or at the rate of £15 a year if the said population does not exceed 200; and (b) a special grant at the rate of £10 a year, provided that the latter grant is not payable in respect of any period during which the staff has not satisfied the conditions of Article 12 (b), subject to the conditions of Articles 9 (g) and 12 (c) as to vacancies.

New and Closed Schools.

33. If the period for which a grant is payable is longer or shorter than a school year, the grant under Article 32 or under Article 31 (a) (ii), and the average attendance on which the grant under Article 31 (a) (i) is calculated, will be altered in proportion to the length of that period reckoned in months and days of a month; a fraction of a unit in the average attendance so altered being ignored, or reckoned as an additional unit, according as it is, or is not, less than one-half.

Grants for Special Instruction.

34. (a)—If courses of instruction in the subjects named below are given according to the regulations of Schedule III., grants are payable at the following rates:—

Cookery.—A grant of 4s. for each scholar who has made the required attendance.

Laundry Work.—A grant of 2s. for each scholar who has made the required attendance.

Housewifery.—A grant of 1s. 6d. for each scholar who has made the required attendance.

Mixed Courses of Instruction in Domestic Subjects.—A grant of 7s. 6d. for each scholar who has made the required attendance.

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Combined Domestic Subjects.—A grant of 10s. for each scholar who has made the required attendance, and a grant of 4s. 6d. for each partial exemption scholar who has made the required attendance in a short course.

Dairy Work.—A grant of 2s. (in respect of not more than two courses) for each scholar who has made the required attendance.

Handicraft.—A grant of 7s. for each scholar who has made the required attendance in a full course of instruction, and of 3s. 6d. for each scholar who has made the required attendance in a short course. A grant of 2s. 6d. for each scholar who has made the required attendance in a course of "light Wood-work."

Gardening.—A grant of 2s. (in respect of not more than two courses) for each scholar who has made the required attendance.

(b)—(i) *The Board may if they think fit, on the application of the Local Education Authority, substitute for the Grants under Article 34 (a) a block grant payable in respect of the whole of the instruction given in the subjects named in this Article (except light wood-work) according to the Regulations of Schedule III. B, due regard being had both to the quantity and quality of such instruction.*

(ii) *For the present, this block grant will be calculated on the basis of the total grant for special instruction paid to the Local Education Authority for the year ending 31st July 1912, but in the case of Local Education Authorities which have adopted a Special Subjects Year commencing 1st April 1912 the block grant will be calculated either on the basis of an addition of 50 per cent. to the grant paid for the eight months ended 31st March 1912 or on the basis of the grant paid for the year ended 31st July 1911.*

(iii) *Allowance will be made for expansion in the work of Special instruction, and for this purpose provision will be made for the payment in addition to the principal block grant, of an additional sum, which will be determined after consideration of any increase in the quantity or improvement in the quality of the work done during the year; but for the present the total amount available for distribution in additional grants will be limited.*

35. The grant in respect of instruction during any Special Subjects Year becomes payable on the first day of the Special Subjects Year next following.

Limitation of Grant in respect of certain Closed Schools.

36. Where grants are payable in respect of a closed school, which, under the provisions of Section 15 of the Education Act, 1902, has not been maintained by the Local Education Authority, the amount of such grants shall not, as a rule, exceed the amount of the net outstanding liabilities of the school on current account at the time of closing.

CHAPTER VI.

HIGHER ELEMENTARY SCHOOLS.

37. (a) A Higher Elementary School is a Public Elementary School which satisfies the further conditions contained in this Chapter.
- (b) The other Articles of this Code are applicable to Higher Elementary Schools, except so far as a contrary intention appears from the terms of this Chapter.
38. Before a School can be recognised as a Higher Elementary School the conditions set out below must be fulfilled :—
- (a) The Board must be satisfied that such a School is necessary having regard to the circumstances of the particular locality.
- (b) The School must be organised to give a three years' course of instruction approved by the Board.
- (c) The Curriculum and Time Table must be submitted for the approval of the Board, and such other information as the Board may require must be supplied.
- (d) The Curriculum must have for its object the development of the education given in the ordinary Public Elementary School, and the provision of special instruction bearing on the future occupations of the scholars, whether boys or girls. A Curriculum will not be approved unless it provides, together with this special instruction, a progressive course of study in the English Language and Literature, in Elementary Mathematics, and in History and Geography. Drawing and Manual Work for boys, and Domestic Subjects for girls, must be included in every case as part of the general or special instruction.
- (e) The premises must be recognised by the Board as suitable for the purposes of a Higher Elementary School, and must be specially equipped for instruction

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according to the approved Curriculum of the School. If the School is held in the same building with an ordinary Public Elementary School or a Pupil-Teacher Centre, the parts of the building assigned to each School, with the exception of rooms which are specially equipped for instruction of a practical kind, must be separate. No room for practical instruction may be used in common by both Schools at the same time. Science rooms and rooms for special instruction will not be counted in fixing the recognised accommodation, which must allow for at least 12 square feet of floor space per scholar. It is desirable that each class should have a room definitely assigned to it for all ordinary purposes.

- (f) The number of scholars in a department of a Higher Elementary School will be limited to about 350, except in the case of a School already in receipt of grants from the Board which is converted into a Higher Elementary School.
39. (a) Admission to a Higher Elementary School is limited to scholars who (i) are over 12 years of age at the date of admission, and (ii) have been for at least two years under instruction in a Public Elementary School. Exceptions may be made with the consent of the Inspector to rules (i) and (ii) in the case of scholars who are receiving instruction in a School at the time of its conversion into a Higher Elementary School, and exceptions may also be made to rule (ii) in the case of other scholars if special reasons are shown.
- (b) Scholars on admission must begin with the first year of the Course, except with the express sanction of the Inspector. This rule does not apply to scholars who are receiving instruction in a School at the time of its conversion into a Higher Elementary School.
 - (c) The Inspector may disallow the admission or continued attendance of any scholar who is clearly unfit to proceed with the Course.
40. (a) No attendance of any scholar in a Higher Elementary School may be counted for grant, unless he has received at least two and a half hours' secular instruction. This may include the interval for recreation, which must not be more than fifteen minutes in duration, unless the secular instruction is prolonged.
- (b) Except in the case provided for by the following clauses of this Article no scholars may remain in a Higher Elementary School after completing the third year of the course, or for any portion of a school year at the close of which they will be more than 16 years of age.

- (c) Where, in pursuance of Section 22 (2) of the Education Act, 1902, the Local Education Authority has, with the consent of the Board, extended the limit for instruction under Part III. of the Education Act, 1902, to scholars who will be more than 16 years of age at the end of the school year, such scholars may remain in the School until they complete the third year of the course.
- (d) In a School where the limit has been so extended, scholars who have completed the three years' course, and have been shown to the satisfaction of the Inspector to be qualified to profit by further instruction in a Higher Elementary School, may remain in the School for a further year, provided that a suitable fourth year course is organised.
- (e) Scholars who were receiving instruction in a School converted into a Higher Elementary School at the date of its conversion, may in any case remain in the Higher Elementary School until the close of the school year in which they complete 15 years of age, provided that arrangements are made for them to receive satisfactory instruction, but no grant will be payable on their account except as provided by Article 42 (a) and (b).
- (f) The school year of a Higher Elementary School will in all cases begin on August 1st.
41. (a) The teaching staff of the Higher Elementary School must be approved by the Board as sufficient and suitable for giving the instruction provided in the approved Curriculum. The recognition of a teacher will not be continued if the Inspector is unable to report favourably on his or her qualifications. Supplementary Teachers and Pupil-Teachers will not be recognised on the staff.
- (b) Persons who have been recognised under previous Codes as Head or Assistant Teachers in a Higher Elementary School, may continue to be so recognised in that School, subject to the favourable report of the Inspector.
- (c) No member of the teaching staff, unless with the previous approval of the Board, may perform duties outside the Higher Elementary School which occupy any part whatever of the school hours.
- (d) The number habitually taught in a class must not exceed forty. There must be a teacher for every class.

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42. (a) In addition to the Fee Grant (for Scholars under 15) and the Aid Grant under Section 10 of the Education Act, 1902, the following grants are payable each year in respect of Higher Elementary Schools, subject to the provisions of Article 30.

For each unit of average attendance
of scholars in the

	Amount.
First Year Course - - - - -	30s.
Second Year Course - - - - -	45s.
Third Year Course - - - - -	60s.
Fourth Year Course (when sanctioned) - - - - -	60s.

No other grants are payable in respect of Higher Elementary Schools.

- (b) No grant will be payable on account of any scholar for any period after the completion of the third year course in a Higher Elementary School unless a fourth year course has been specially sanctioned for the School in which he is receiving instruction, and no grant will, in any case, be payable on account of any scholar for any period after the completion of the fourth year course in a Higher Elementary School.

CHAPTER VII.

ATTENDANCE, SCHOOL MEETINGS, ETC.

43. "Attendance" for the purpose of ascertaining the average attendance of a school may be reckoned only in accordance with the regulations of this and the following Article. The registration of attendances must comply with the rules of Schedule IV.

- (a)—(i) No attendance may be reckoned for a scholar who is under three years of age;
(ii) *Unless the Board have consented to an extension under § 22 (2) of the Education Act, 1902,* no attendance may be reckoned for a scholar who will be more than sixteen years of age (a) at the close of*

* Section 22 (2) of the Education Act of 1902 reads as follows:—"The power to provide instruction under the Elementary Education Acts, 1870 to 1900, shall, except where those Acts expressly provide to the contrary, be limited to the provision in a public elementary school of instruction given under the regulations of the Board of Education to scholars who, at the close of the school year, will not be more than sixteen years of age: Provided that the Local Education Authority may, with the consent of the Board of Education, extend those limits in the case of any such school if no suitable higher education is available within a reasonable distance of the school."

the School Year, or (b) at the close of the Educational Year if the Board have made an order under § 2 of the Education (Administrative Provisions) Act, 1911,* in respect of the School.

(b) No attendance of any scholar may be counted for grant unless he has received at least one and a half hours of secular instruction in the case of a school or class for infants, or two hours in the case of a school or class for older scholars, in each case inclusive of the necessary recreation.† (Article 44 (e).)

(c) In the case of a "partial exemption" scholar who has received two hours or more of secular instruction as required by the preceding Clause, an additional half attendance may be counted towards the total number of attendances reckoned for grant, subject to the following limitation :—

The total of the additional attendances allowed in the case of any partial exemption scholar may not exceed the number which, when added to the number of his two-hour attendances during the school year (or that portion of the year during which he has been a partial exemption scholar), gives the number of the school openings in the corresponding period.

The term "partial exemption scholar" means a scholar who is certified by or on behalf of the Local Education Authority to be qualified by age and attainments or previous attendance for employment in conformity with the byelaws, or, if not subject to the byelaws, in conformity with the Elementary Education Act, 1876, or any other Act regulating the education of children employed in labour, and in either case recognised by the Board as a partial exemption scholar.

The Board may disallow all or part of the additional attendance claimed in respect of a partial exemption scholar who has not attended school with due regularity in conformity with the byelaws.

(d) In schools, other than Marine schools, which, under Section 15 of the Education Act, 1902, are not maintained by the Local Education Authority, the attendances of children who are not resident in the institution will not be recognised for grant. This restriction will not apply in the case of any such children who have been attending the school before 1st August 1905.

* Section 2 of the Education (Administrative Provisions) Act, 1911, reads as follows:—"For the purposes of subsection (2) of § 22 of the Education Act, 1902, the Board of Education may, on the application of the Local Education Authority, by order, substitute, as respects any public elementary school within the area of the authority, the close of the educational year as fixed by the Board for that school for the close of the school year, and as respects any such school that subsection shall have effect as if the close of the educational year fixed by the order were substituted for the close of the school year."

† Interruptions of secular instruction by reason of arrangements necessary for medical inspection may be disregarded for the purposes of this Article. (See also Article 44 (h).)

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- (e) No attendance for the purpose of this Article may be reckoned for a scholar at any meeting at which he is employed as a Monitor (*Article 11 (f)*); and his attendance must be marked as provided for by Rule 21 of Schedule IV.

44. In making up the minimum time required under Article 43 (b) in order that an attendance may be reckoned for grant there may be included—

- (a) any time occupied by secular instruction, according to the approved Time Table, given to the scholars elsewhere than at the school ;
- (b) any time occupied by visits paid during the school hours to places of educational value or interest, or by field work, or by rambles ;

Notice of the time and place must be sent to the Inspector, but his previous sanction will not be required where the Local Education Authority have, in consultation with him, made satisfactory arrangements for sanctioning and regulating work done under this provision.

- (c) any time occupied by a central examination (other than for Labour Certificates) attended by scholars with the sanction of the Inspector, provided that the time allowed for examination be not less than one hour and a half ;
- (d) any time occupied in attending at a Training College or Pupil-Teacher Centre, or other place approved by the Board for the purpose of model or criticism lessons ;
- (e) the necessary period for recreation.
The period for recreation, in the case of infants under five years of age, must be fifteen minutes, and may be extended to half an hour ; and in the case of scholars over five years of age must be ten minutes. More recreation may be given, but only when the period of secular instruction, inclusive of recreation, is prolonged beyond the necessary one and a half, or two hours ;
- (f) a period occupied during the school hours under arrangements approved by the *Local Education Authority* in properly organised games for older children under competent supervision and instruction ;

The period so occupied must be confined to one morning or one afternoon in each week and must be not less than half an hour or more than two continuous hours, exclusive of the time, if any, spent in going to or returning from the playing-field.

- (g) any time spent during the ordinary school term under arrangements and according to a Time Table approved by the Board at an open-air school, school

camp, or other place selected with a view to an improvement of the health and physical condition of the children, *or upon a school journey*;

The Board may at any time require the Local Education Authority to furnish them with a Special Report by the School Medical Officer on the working and effect of any arrangements made under this Article.

For the purposes of this Code "School Medical Officer" means a Medical Officer named by the Local Education Authority, and recognised as such by the Board. In exceptional cases the Board will recognise separate School Medical Officers for separate parts of one area.

- (h) any period occupied by a medical inspection of scholars conducted by or under the authority of the Local Education Authority in pursuance of the requirements of Section 13 of the Education (Administrative Provisions) Act, 1907, whether such inspection is conducted in the school premises or (in special circumstances) in some other place appointed for the purpose by the Local Education Authority with the approval of the Board.

45. The school or department must have met not less than 400 times in the school year.

- (a) If the grant is payable for a period other than 12 months, the number of meetings required under this Article will be altered in proportion to the length of the period.
- (b) If the requisite number of meetings has not been held owing to a closure of the school under Article 57, or under the advice or with the approval of the School Medical Officer, or for any other unavoidable cause, the grant may be paid in full, provided that the requirements of this Article are satisfied after an allowance of 9 meetings has been made for each week of such closure.
- (c) In making up the required number of meetings there may be included, if necessary, the number of meetings which would ordinarily have been made during times when the school premises were temporarily used, under Section 6 of the Ballot Act, 1872, for an election, or under any other statutory power.

In the case of Greenwich Hospital School and Marine Schools this Article will not be applied.

46. The "average attendance" of any section of a school or department for which a separate grant based on average attendance is payable, for a school year or any other period for which a grant is payable, is the quotient of the total number of attendances made during that period divided by the number of meetings during that period, a fraction of a unit being ignored or reckoned as an additional unit according as it is, or is not, less than one half.

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CHAPTER VIII.

MISCELLANEOUS REGULATIONS AND CONDITIONS.

47. All Returns called for by the Board or by Parliament must be duly made.

48. The registers and other necessary school records must be properly kept, and, if required by the Board or by the Inspector who visits the school, the registers and other school documents, or any of them, must be submitted for inspection forthwith.

Rules as to the provision and use of registers and other school documents are given in Schedule IV. and must be strictly observed by managers and teachers.

49. Before an Annual Grant for any period is paid in respect of instruction given in any school or department, the Board must be satisfied, by certificates in a prescribed form, that—

- (a) the school has been conducted as a Public Elementary School in accordance with the conditions expressly required by the Education Acts to be fulfilled, in order that an Annual Parliamentary Grant may be payable; and
- (b) the admission and daily attendance of the scholars have been carefully registered by, or under the supervision of, the Head Teacher, and have been duly verified from time to time by the Managers, or, in the case of a school which, under Section 6 of the Education Act, 1902, has no Managers, by a responsible officer appointed by the Local Education Authority.

In the case of a school maintained by the Local Education Authority, the certificates required under this Article should be signed by three Managers (if the School has Managers) and by some responsible officer of the Local Education Authority whose name and status have previously been notified to the Board of Education by the Clerk of the Authority. In the case of a school which, under the provisions of Section 15 of the Education Act, 1902, is not maintained by the Local Education Authority, the certificates must be signed by three managers.

The signatures required by this Article must be autograph and manuscript.

50. Before an Annual Grant for any period is paid in respect of any school or department, the Board must have received a certificate from an Inspector, stating that to the best of his information and belief the school or department has been conducted in accordance with the conditions directly required by the Education Acts to be fulfilled by an Elementary School in order to obtain an Annual Parliamentary Grant. The Inspector will also certify respecting the other conditions of grant contained in this Code.

51. (a) The body of Managers of a Public Elementary School which is maintained by the Local Education Authority must have a Correspondent through whom any communications that may be necessary on behalf of the Managers,* with the Board or with the Local Education Authority, should be made.
- (b) Every Public Elementary School which is not maintained by the Local Education Authority must have responsible Managers and a Correspondent.
- (c) A paid teacher in a Public Elementary School may not be the Correspondent of that or of any other Public Elementary School, nor may he be a Manager of any Public Elementary School, unless as a member of an Education Committee he is required to serve as a Manager by the rules or standing orders governing that Committee. In no case may a paid teacher act as a Manager of a Public Elementary School in which he is employed as a teacher.
- (d) When there is a change in the office of Correspondent, the name and full postal address of the new Correspondent should be notified to the Board as soon as possible by the outgoing Correspondent or by the Chairman or Acting Chairman of the Managers.
52. The school must not be conducted for private profit, and must not be farmed out to the teacher. The income of the school must be applied only for the purposes of Public Elementary Schools. (*Section 20, Elementary Education Act, 1876.*)
53. (a) No child may be refused admission to a Public Elementary School on other than reasonable grounds.
- (b) Where the Board are satisfied (i) that proper arrangements have been made by the Local Education Authority for enabling the School Medical Officer to ascertain and certify cases in which the exclusion of children from school is desirable, and (ii) that the School Medical Officer has authorised the exclusion of certain children from the school
- (1) on the ground that their exclusion is desirable to prevent the spread of disease, or
- (2) on the ground that their uncleanly or verminous condition is detrimental to the other scholars, or

* All communications from the Board in respect of the ordinary matters of control and maintenance of a Public Elementary School maintained by the Local Education Authority will, as a rule, be made to the Clerk of the Local Education Authority at such address as may be communicated to the Board for this purpose.

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- (3) on the ground that, owing to their state of health or their physical or mental defects, they are incapable of receiving proper benefit from the instruction in the school,

the exclusion of such children shall be deemed for the purposes of this Code to be exclusion on reasonable grounds.

For the purposes of this provision the Local Education Authority may direct that no children who have been excluded under the authority of the School Medical Officer or under Article 57 or who have been absent from school owing to sickness shall be re-admitted to school if the School Medical Officer is not satisfied that they can attend school without risk to themselves or others.

Every direction or authority given by the School Medical Officer must be embodied in a certificate signed by him. A copy of every certificate must be furnished to the Local Education Authority and must be produced, if required, to any Inspector or Officer of the Board's Medical Department.

- (c) Where the Local Education Authority have so determined in the case of any school maintained by them, children who are under five years of age may be refused admission to that school.

54. (a) In the case of any school approved for the purpose by the Board, students from a Training College or other students or teachers undergoing training, must, on request from the authorities of the College, or from the Local Education Authority, or from the Board of Education, be allowed to attend the school for the purpose of practical instruction in teaching, or for observation, on such conditions as may be approved by the Board.

- (b) The school building of any Public Elementary School may be used free of charge outside school hours by the Board of Education for the purpose of holding an examination.

55. The weekly fee (if any) charged for admission to a school must be approved by the Board.

56. Notice must be sent to the Inspector as soon as is possible in each case, of every date upon which the school will be closed or its ordinary work suspended, whether for the holidays or for any special occasion, and in the event of failure to give timely notice a deduction may be made from the Annual Grant unless the Managers or the Local Education Authority acted without timely notice by reason of a sudden emergency. Unless it is possible to give at least seven days' clear notice of an intended closure, such notice should be given by telegram

addressed to the Inspector, Board of Education, Whitehall, London.

57. If the Sanitary Authority of the district in which the school is situated, or any two members thereof acting on the advice of the Medical Officer of Health, require either the closure of the school or any department thereof or the exclusion of certain children for a specified time, with a view to preventing the spread of disease or any danger to health likely to arise from the condition of the school, such requirement must at once be complied with.

Medical Inspection.

58. (a) Arrangements must be made so far as practicable for carrying out the work of medical inspection in the school premises, and the Managers shall give such reasonable facilities as are required by the Local Education Authority for the purpose.
- (b) The Board must be satisfied that provision has been made for the medical inspection of all children admitted to the school *in the year*, and of all children who are expected to leave school *in the year—the year in each case being the twelve months ending on the 31st of July.*

The provisions of the Articles of this Code and of the Schedules, which have the same authority as the Articles, will come into operation in England, excluding Wales and Monmouthshire, on 1st August, 1912, and until that date the Code for 1909, *as modified by the Minutes dated June 25th, 1910, June 13th, 1911, and February 28th, 1912,* remains in operation.

Given under the Seal of Office of the Board of Education on Thursday, the 20th day of June, 1912, and presented to Parliament pursuant to the 97th Section of the Elementary Education Act, 1870, to lie on the Tables of both Houses for one month.

L. A. SELBY BIGGE.

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SCHEDULE I.

Information as to Teachers.

A.

CERTIFICATED TEACHERS.

1. In order to be recognised as a Certificated Teacher, the candidate must satisfy the Board of Education, in the manner prescribed by the Elementary School Teachers Superannuation Rules, 1899, of his or her age and physical capacity, and must possess one of the following qualifications :—

He or she must either—

- (i) have been trained in a Training College recognised under the Regulations for the Training of Teachers for Elementary Schools and have passed the Board's Final Examination of Students in Training Colleges or an Alternative Final Examination sanctioned under those Regulations ;
- or (ii) have passed the Certificate Examination of the Board for Teachers in Elementary Schools ;
- or (iii) have been recognised as a Certificated Teacher by the Scotch Education Department after passing the Certificate Examination or satisfactorily completing the period of training prescribed by the Regulations of that Department ;
- or (iv) be certificated in the First Class by the Irish Commissioners of National Education ; or be reported by them to have passed the revised examination and to have received a Diploma from them ; provided in either case that he or she has been trained in a Training College, and that no adverse report is received from the Commissioners ;
- or (v) have passed a final examination for a degree, held by a University in the British Empire and recognised by the Board for this purpose, or be an Associate of the Royal College of Science ; provided in each case that he or she holds one of the following certificates of proficiency* in the Theory and Practice of Teaching :—
 - (1) The Diploma of the University of Oxford in the Theory, History, and Practice of Education.
 - (2) The Certificate of the University of Cambridge in the Theory, History, and Practice of Teaching, if accompanied by the Certificate of Practical Efficiency in Teaching.
 - (3) The Teacher's Diploma of the University of London.
 - (4) The Durham University Certificate of the Theory and Practice of Teaching.
 - (5) The Teacher's Diploma of the Victoria University of Manchester.
 - (6) The Diploma of Associate, Licentiate, or Fellow of the College of Preceptors, if accompanied by the Special Certificate of ability to teach.

* The continued recognition of these certificates of proficiency is under consideration. Candidates desiring recognition in virtue of certificates of proficiency granted on courses of study and training begun on or after August 1st, 1908, may be required to show that their courses have included the methods of teaching all the subjects ordinarily taught in Public Elementary Schools, and a definite period of practice in teaching in Public or other Elementary Schools.

Schedule I.—(cont.)

(7) The Schoolmaster's Diploma granted to Graduates by the University of Edinburgh.

(8) The Diploma of the University of Dublin in Theoretical and Practical Teaching.

(9) The Teacher's Certificate of proficiency in the Theory and Practice of Education awarded by the University of Wales;

or (vi) have qualifications which, in the opinion of the Board, are substantially equivalent, for the purpose of teaching in Public Elementary Schools, to those represented by the Board's Certificate.

2. Candidates who satisfy the conditions in the preceding regulation may be recognised as Certificated Teachers from the following dates:—

(i) Candidates who have been trained in a Training College recognised under the Regulations for the Training of Teachers for Elementary Schools and pass the Board's Final Examination of Students in Training Colleges, or an Alternative Final Examination under those Regulations, may be recognised as Certificated Teachers from the 1st of August following the close of their period of training.

(ii) Candidates who pass the Certificate Examination of the Board may be recognised from the 1st of April following the date of the Examination.

(iii) Candidates who become qualified for recognition by passing any other examination or examinations may be recognised as Certificated Teachers from the first day of the month following the date on which the result of the last of their qualifying examinations was announced, or from the date on which they begin to be employed in service which may be recorded by the Board under the Elementary School Teachers (Superannuation) Act, 1898, whichever is the later.

3. (i) Persons who have been trained in a Training College recognised under the Regulations for the Training of Teachers for Elementary Schools, and have attended either the Board's Final Examination of Students in Training Colleges, or an Alternative Final Examination under those Regulations, but have failed to pass such examination, may, if the Board think fit, be recognised as temporarily Certificated Teachers for one year and nine months after leaving the Training College. *In the case of a student whose approved Alternative Examination was a Final Examination for a Degree, this period may be extended by the Board to a period not exceeding three years in all.*

(ii) The Board may in exceptional circumstances accord such temporary or conditional recognition as a Certificated Teacher, as they may deem expedient.

(iii) Persons who have already been recognised as Certificated Teachers under previous Codes may continue to be so recognised.

4. (i) A person who has been recognised by the Board as a Certificated Teacher (otherwise than under Rule 1 (iii.) or (iv.) of this schedule) from the 1st August, 1907, or some later date, will receive from the Board a Certificate on making application for that purpose at any time after his recognition.

(ii) This Certificate may be endorsed by the Board when the teacher has within twenty-four consecutive months completed one year's service as a Student-Teacher, an Uncertificated Teacher, or a Certificated Teacher in England or Wales in a Public Elementary School, or a Certified Efficient School, or a Certified School for Blind, Deaf, Defective, or Epileptic Children, or a Poor Law School, or a Certified Industrial or Day Industrial School, or a Certified Reformatory. *Service as a Student-Teacher rendered after the 31st July 1914 will not be reckoned for the purpose of this Rule.*

(iii) A Certificate will not be issued to a person who is only temporarily or conditionally recognised as a Certificated Teacher.

(iv) The conditions under which persons who have been recognised by the Board as Certificated Teachers from dates earlier than the 1st August, 1907, will be eligible to receive certificates, will be those stated in the Code for 1906, Schedule I.A, 4 and 5.

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Schedule I.—(cont.)

5. A certificate may at any time be recalled or suspended. The Board will use every available means of informing the teacher of the charges against him, and of giving him an opportunity of explanation.

6. The certificate of a teacher, who becomes certificated after 1st April, 1899, will expire on his attaining the age of sixty-five years, or, if the Board on account of his special fitness allow his services to continue for a further limited time, then on the expiration of that limited time.

The provisions of this Regulation will apply to teachers certificated before 1st April 1899, who have accepted the Elementary School Teachers (Superannuation) Act, 1898.

B.TEACHERS HAVING THE STATUS OF
CERTIFICATED TEACHERS.

A teacher who is qualified for recognition as a Certificated Teacher under Schedule I. A., with the exception that he has failed to satisfy the Board in the manner prescribed by the Elementary School Teachers Superannuation Rules, 1899, of his physical capacity, may, if the Board think fit, be given the status and position of a Certificated Teacher for the purposes of Articles 9 and 12, but not for the purposes of the Elementary School Teachers (Superannuation) Act, 1898.

C.UNCERTIFICATED TEACHERS.

1. A candidate for recognition as an Uncertificated Teacher *must be over eighteen years of age*, must produce a satisfactory medical certificate in a form approved by the Board, and must possess one of the following qualifications:—

He or she must either—

- (i) have passed the King's Scholarship Examination or the Preliminary Examination for the Elementary School Teachers' Certificate held by the Board; or
- (ii) have passed the King's Scholarship Examination of the Scotch Education Department; or
- (iii) have passed a final examination for a degree held by a University in the British Empire and recognised by the Board for this purpose; or
- (iv) be certificated in the First Class by the Irish Commissioners of National Education, without having been trained in a Training College; or be certificated in the Second Class, or recognised in the First or Second Grade, by the same Commissioners; or pass the revised examination after having been trained in a Training College; provided in each case that no adverse report is received from the Commissioners; or

Schedule I.—(cont.)

- (v) be over 21 years of age, have served for not less than five years in a Poor Law School, be certified in the Efficiency grade, and be favourably reported on by an Inspector; or
- (vi) have passed the examination for appointment as Army Schoolmaster or Schoolmistress, or hold the Army Acting Schoolmaster's Certificate, be recommended by the War Office, and be favourably reported on by an Inspector; or
- (vii) have passed one of the following examinations,* and be over eighteen years of age, provided that where success in specific subjects is required, it must *as a rule* be obtained within two years and six months of the first examination, and from the same Examining Body:—

(1) The Higher Certificate of the Oxford and Cambridge Schools Examination Board.

(2) The London University Matriculation Examination.

(3) *The London University Senior School Examination, if the candidate satisfies the Examiners either in the subjects required for Matriculation, or in the following five subjects:—(a) Arithmetic, (b) English, (c) Modern History, (d) Geography, (e) either Mathematics (if taken as a subject distinct from Arithmetic), or Physics, or Chemistry, or Botany, or a language other than English.*

(4) The Matriculation Examination conducted by the Joint Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield.

(5) The Birmingham University Matriculation Examination, or the Examination for such Senior School Certificates as exempt the holders from the Matriculation Examination.

(6) The University of Wales Matriculation Examination.

(7) *The Durham University Matriculation Examination.*

(8) *The Bristol University Matriculation Examination.*

(9) *The Senior School Certificate Examination of the Joint Matriculation Board of the Universities of Manchester, Liverpool, Leeds, and Sheffield, if the candidate passes either in the subjects required in Matriculation, or in English Literature, English History, Geography, Mathematics, and two other subjects.*

(10) (Cancelled).

(11) The Oxford University Higher Local Examination.

(12) The Cambridge University Higher Local Examination.

(13) The Oxford University Local Examination for Senior Students, provided that the candidate is certified by the Delegates of Local Examinations to have satisfied the Examiners in Section 1 (Arithmetic), and in two of the following:—Section 3 (History); Section 4 (English Language and Literature); Section 5 (Geography).

(14) The Cambridge University Local Examination for Senior Students, provided that English Language and Literature (Section 2) is included among the Sections in which the Candidate has passed.

(15) (Cancelled).

(16) The College of Preceptors Examination for the Diploma of Associate.

(17) The First Class Certificate of the College of Preceptors, provided that the candidate has passed in (1) *Arithmetic*, (2) *English History or Geography*, and (3) in *Geometry or Algebra*.

* The list of examinations recognised for this purpose is subject to reconsideration.

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Schedule I.—(cont.)

- (18) The Senior Certificate Examination of the Central Welsh Board, provided that the candidate has passed in (1) *Arithmetic or Mathematics*, and (2) in *English Language (Schedule 2 C), or English Language and English Literature, or History*; or
- (viii) have qualifications which, in the opinion of the Board, are substantially equivalent, for the purpose of teaching in Public Elementary Schools, to those represented by success in the Board's Preliminary Examination for the Elementary School Teachers' Certificate.
- (ix) Persons who have passed the examination for the Elementary or Higher Certificate of the National Froebel Union, and have produced a satisfactory Medical Certificate in a form approved by the Board, may be recognised as Uncertificated Teachers (a) in infants' schools or departments, and (b) in Schools for Blind or Deaf Children, subject to the further conditions stated in Articles 16 and 17 of the Regulations applicable to those Schools.
2. (i) A person who has been a Pupil-Teacher will not be recognised as an Uncertificated Teacher until the termination of the period fixed for his recognition as a Pupil-Teacher by Article 5 of the Regulations for the Preliminary Education of Elementary School Teachers.
- (ii) A person who has been a Bursar will not *as a rule* be recognised by the Board as an Uncertificated Teacher even if he is above the age of 18, and has passed an examination qualifying for recognition as an Uncertificated Teacher, unless he has either been for at least a year in a Training College or been employed for a year as a Student-Teacher.
- (iii) Subject to (i) and (ii), the recognition of an Uncertificated Teacher may date from the first day of the month following the date on which the result of the examination by which he is qualified was announced.
3. The Board may, in exceptional circumstances, accord such temporary or conditional recognition as an Uncertificated Teacher, as they may deem expedient.
4. Teachers who have been recognised as Assistant Teachers under Articles 50 or 51 of previous Codes may be recognised as Uncertificated Teachers.
5. Recognition as an Uncertificated Teacher may at any time be recalled or suspended. The Board will use every available means of informing the teacher of the charges against him, and of giving him an opportunity of explanation.

D.

SUPPLEMENTARY TEACHERS.

1. Where the Board are satisfied that the circumstances of the case render it necessary, they may recognise from time to time, as Supplementary Teachers, suitable women over eighteen years of age, who are specially approved by the Inspector for their capacity in teaching.
2. The Board may make it a condition of the recognition or continued recognition of Supplementary Teachers in the area of any Local Education Authority that the Authority make suitable provision for enabling such Teachers to prepare and improve themselves for the practical work of teaching; and in the case of any individual Supplementary Teacher that she shall avail herself of any such provision; or that she shall receive such other special training as the Inspector may approve.
3. Not more than two Supplementary Teachers will be recognised on the staff of a department at any one time. Where, however, more than two Supplementary Teachers were employed in a department on 31st July, 1909, they may continue to be recognised, subject to the operation of Schedule I.D. 6 of the Code of 1908.

Schedule I.—(cont.)

4. A woman recognised as a Supplementary Teacher is only allowed to teach (i) *Infants' classes, that is to say, classes in which the majority of the scholars are under eight years of age, or (ii) the lowest class of older scholars in a school or department in a rural parish if the average attendance in the school does not exceed 100.* For the purpose of this provision children attending separate schools for boys or girls or infants in the same neighbourhood will ordinarily be counted as attending a single school.

Provided that Supplementary Teachers recognised in a school or department for older children on 31st July, 1909, may continue to be employed in that school or department till 31st July, 1914.

In the case of a Boys' department the Board will require to be satisfied that the building and sanitary arrangements are suitable.

5. A candidate for recognition as a Supplementary Teacher must produce a satisfactory Medical Certificate in a form approved by the Board, if the candidate has not been previously recognised as a Supplementary Teacher or an Additional Woman Teacher.

6. The recognition of a Supplementary Teacher is subject to reconsideration from year to year, and may be withdrawn at any time. Recognition is given only for the school or department in which the Teacher is serving; and on her removal to another school or department, the question of her recognition will be considered afresh.

7. The Board may give provisional recognition to newly appointed Supplementary Teachers for such period as they think fit, beginning with the date on which the appointment has been notified to the Board.

SCHEDULE II.

Regulations for the Employment of Teachers undergoing Preliminary Education.

A.

STUDENT-TEACHERS.

1. A Local Education Authority, which has brought into operation a Scheme approved by the Board for the supervision of Student-Teachers and for such training of them in the Art of Teaching as is possible in the circumstances, may recommend a Student-Teacher for approval by the Board as part of the Staff of a Public Elementary School subject to the conditions specified in Articles 36 to 42 of the Regulations for the Preliminary Education of Elementary School Teachers. The recognition of a Student-Teacher will be for one year, but may be continued for a second year with the approval of the Board.

2. The candidate must have passed an examination accepted by the Board as a qualification for admission to a Training College, and must satisfy the following further conditions:—

- (a) He must have been in receipt of continuous instruction for not less than three years at a School which is on the list of Secondary Schools recognised as efficient.
- (b) He must be suitable in respect of character, health, and freedom from personal defects to become a Student-Teacher.
- (c) He must have been over 17 years of age on the 31st of July immediately preceding his recognition.
- (d) He must have produced a Certificate signed by the Head Master or Mistress of the Secondary School that he is in character and ability a fit and proper person to be a teacher in an Elementary School.
- (e) He must have made a declaration that he desires to become an Elementary School Teacher.

3. Student-Teachers may either (a) be employed as part of the staff of the Public Elementary Schools selected with the approval of the Board as suitable for the purpose, or (b) be allowed to attend such schools in accordance with Article 54 (a) of the Code.

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Schedule II.—(cont.)

4. The attendance of a Student-Teacher at the Elementary School may not exceed eight meetings in any one week. The Head Teacher of the school must keep registers showing the time spent by the Student-Teacher in the school and full records of the manner in which it was employed.

5. In addition to the practical training and experience which they obtain in the Elementary School, Student-Teachers must obtain such further general education as may be available, to the satisfaction of the Board. Their course of study and training must be properly supervised in accordance with the scheme approved for the area by the Board.

6. *Student-Teachers are not permitted to enter for any examination during the year of Student-Teachership, without the express approval of the Board obtained beforehand.*

7. The recognition of a Student-Teacher may be withdrawn at any time by the Board if any of the conditions on which he was recognised cease to be fulfilled, or if the Board are satisfied that he is not receiving training in accordance with the approved scheme, or if the requirements of the Regulations are not observed in his case, or if an Inspector of the Board reports unfavourably on his suitability for the teaching profession.

B.

PUPIL-TEACHERS.

1. Boys and girls who are receiving (a) training in teaching in Public Elementary Schools, together with (b) instruction accepted by the Board, may be recognised as Pupil-Teachers subject to the conditions stated in the Regulations for the Preliminary Education of Elementary School Teachers, or, as regards Schools in Jersey, subject to conditions specially approved by the Board.

2. *(Cancelled).*

3. *(Cancelled).*

4. A Pupil-Teacher must be employed or in receipt of training in the art of teaching at Public Elementary Schools for not less than 100 and not more than 225 meetings if his period of recognition is one year, not less than 100 meetings in each year and not more than 450 meetings in all if his period of recognition is two years, and not less than 100 meetings in each year and not more than 675 meetings in all if his period of recognition is three years.*

5. The conditions of employment of every Pupil-Teacher must be such as to ensure that he shall have either two half-days or one whole day in each week free from employment or other requirement, in addition to the time set apart for his instruction.

6. Every Pupil-Teacher must be either in employment and training in a Public Elementary School or in receipt of instruction accepted by the Board under the Regulations for the Preliminary Education of Elementary School Teachers throughout the whole of each year of his recognition, with the exception of ordinary holidays. In the event of the closure of the Public Elementary School or place of instruction through unavoidable cause, provisional arrangements must be made for the employment of the Pupil-Teacher's time after consultation with an Inspector of the Board.

7. In any case in which, owing to a change of residence of a parent or guardian or for any other sufficient reason, it becomes necessary to arrange for the transfer of a Pupil-Teacher during the period of his recognition by the Board to employment in another Elementary School or instruction in another Pupil-Teacher Centre, whether within the area of the same or that of another Local Education Authority a notification of the transfer must be sent to the Board in a form prescribed by them; and it will be a condition of continued recognition that provision shall have been made for the instruction and employment or training of the Pupil-Teacher to proceed without breach of continuity.

* Rules 4 to 13 are taken from Chapter I. of the Regulations for the Preliminary Education of Elementary School Teachers.

Schedule II.—(cont.)

8. In calculating the number of meetings during which a Pupil-Teacher has been employed or trained in Public Elementary Schools, every meeting during any part of which he has been so employed or trained must be counted as a meeting.

9. No Pupil-Teacher may be employed or trained in any school which is not selected by an Inspector of the Board as suitable for the purpose of training Pupil-Teachers.

10. Not more than four Pupil-Teachers in all may as a rule be employed in any department, but a larger number recommended by the Inspector may be employed in any case where the Board are satisfied that the department is specially adapted for the purpose of training Pupil-Teachers.

11. Pupil-Teachers must be trained under the supervision of the Head Teacher of the school in which they are employed, and the Head Teacher must keep registers showing the time spent by each Pupil-Teacher in employment or training and full records of the nature of the employment and training. These registers must be verified from time to time by the Managers of the School.

12. Girls may not be employed, except with the special consent of the Board, as Pupil-Teachers in a boys' school, or boys in a girls' or infants' school.

13. The recognition of a Pupil-Teacher may be withdrawn at any time by the Board if any of the conditions on which he was recognised cease to be fulfilled, or if the Board are satisfied that he is not receiving instruction or training in teaching such as they can accept under the Regulations for the Preliminary Education of Elementary School Teachers, or if an Inspector of the Board reports unfavourably on his suitability for the teaching profession.

SCHEDULE III.

A.

Regulations for the Teaching of Special Subjects, for which Grants are payable under Article 34 (a).

*(Modifications of the articles are indicated as far as possible
by italics.)*

General Regulations.

1. Courses of instruction in Special Subjects must be begun and completed in the same Special Subjects Year. In the case of Gardening the Special Subjects Year runs from November 1st to October 31st. In the case of all other subjects the Special Subjects Year runs from August 1st to July 31st. Where, however, the Summer holidays ordinarily end before the 1st August or begin after the 31st July, courses may be begun or completed, as the case may be, before or after those dates, the consent of the Board having previously been obtained.

Where the Local Education Authority have adopted a uniform Educational Year running from the 1st April to the 31st March for all Schools in their area, the 31st March may, with the previous consent of the Board, be substituted for the 31st July, and the 1st April may be substituted for the 1st August, and the word "Easter" may be substituted for the word "Summer" in this regulation; and the Board may make in the conditions and rate of the grants payable under this Schedule any adjustment required by such substitution.

2. A course of instruction must be either (a) a Centre course, given in a Centre to scholars from more than one Public Elementary School; or (b) a School course, given not in a Centre, to scholars of one Public Elementary School.

3. The premises in which instruction in Special Subjects is given must be approved by the Board for the purpose. Plans of all premises not previously approved, and of enlargements, must be approved by the Board before the premises are used, and it must be stated whether they are to be used for Centre or School Classes.

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Schedule III.—(cont.)

4. The premises must be suitably equipped and adequately supplied with materials for the use of the scholars in practical work. A copy of the Code must be kept in all premises used for teaching Special Subjects.

5. More than one Class may be arranged during the Special Subjects Year either successively or concurrently if the premises permit, each being denoted by a distinguishing capital letter (Class A, Class B, etc.). Notice of the place and times at which each Class is to be held, with the indicative letter assigned to each Class, must be sent to the Board at least one week before the instruction begins. Special registers must be kept for each Class in accordance with Rule 14 of Schedule IV.

6. Notice must be sent to the Inspector as soon as is possible in each case if there is any alteration of the Time Table, or if any Class will, for any special reason, not be held at the usual time. Unless seven days' clear notice can be given, notice should be given by telegram addressed to the Inspector at the Board of Education. In the event of failure to give timely notice a deduction may be made from the Grant.

In the case of Domestic Subjects, the Inspector for the purpose of these Regulations is the Woman Inspector assigned to the Division in which the Centre or School is situated.

7. As a rule, the Time Table of each course of instruction in Special Subjects, other than Gardening, must provide for not less than two hours' instruction weekly, exclusive of any interval for recreation, during the period covered by the course; each lesson should, as a rule, occupy not less than two hours. A short interval for recreation may be given during any lesson, but no period spent in recreation will be reckoned towards the number of hours attendance required for a Special Grant.

8. Every syllabus of instruction must be submitted to the Inspector before the instruction begins; or the Inspector must be informed that a previously approved syllabus will again be used. The Board may require the modification of any syllabus which is unsuitable.

9. (a) The teacher of a Class in a Special Subject must hold a Diploma recognised by the Board, or must have been specially approved by the Board. Notice should at once be given to the Board of the leaving of any teacher or the appointment of any new teacher.

(b) If the Board are satisfied that a teacher, who possesses one of the qualifications mentioned in this Schedule, or who has been specially approved under this rule for teaching a Special Subject, is not in fact an efficient teacher, they may at any time refuse to recognise that teacher as a teacher of a Class in that subject.

10. No scholar may be registered in any Class who is not in attendance for the purposes of ordinary instruction at a Public Elementary School, other than a Higher Elementary School, or who (except in the case of Handicraft) will not be qualified by age to remain at the Public Elementary School under Article 43 (a) of this Code up to the end of the course.

Any scholar who ceases to attend for ordinary instruction at a Public Elementary School must be withdrawn from the Class.

11. Except with the previous consent of the Inspector, instruction in a Special Subject may not be given at a time falling wholly outside ordinary school hours. The attendance of scholars at Classes in a Special Subject held at such a time must not be counted as school attendance for the purposes of Article 46 of the Code.

12. Grant will be payable after the conclusion of the Special Subjects Year on Certificates given by the Local Education Authority and the Inspector that the conditions contained in these Regulations have been fulfilled, and a Certificate given by the Inspector that the instruction is satisfactory.

13. When the completion of a course of instruction has been prevented by the closure of a School or Centre under Articles 45 (b) or 57, or any other unavoidable cause, or where the instruction is reported to be defective or any of the conditions have not been complied with, the Board may, if they think fit, pay the grant with or without deduction.

Age of Registered Scholars.

14. The normal age at which scholars may be registered in Classes in Special Subjects is that given in the particular rule relating to each subject (Rules 19 (c), 23 (c), 26 and 39 (a)); but in exceptional circumstances a few scholars who have

Schedule III.—(cont.)

not reached the normal age may be registered in Classes in Cookery, Laundry Work, Housewifery, *Mixed courses in Domestic Subjects*, Combined Domestic Subjects, Dairy Work, and Gardening, provided that—

- (a) they are physically fit to take advantage of the instruction given ;
- (b) their inclusion in the Class is directly conducive to the better organisation of the ordinary school work ;
- (c) their presence in the Class does not interfere with the instruction of the older scholars, and
- (d) adequate provision has been made for the instruction in that subject of children of the normal age, irrespective of their position in school.

As soon as the registration of a Class is complete, a statement must be sent to the Board of the number of children below the normal age registered in each Class in the area, and if the Board are not satisfied that these conditions are fulfilled they may require the registration of any scholars below the normal age to be cancelled.

Special Regulations.

DOMESTIC SUBJECTS.

15. Every scholar must be registered in a Class not later than the second day on which instruction is given to the Class, and no scholar may be added during the progress of the course, provided that—

- (a) Special arrangements (including arrangements for registration) may with the previous consent of the Board be made to meet the case of—
 - (i) Scholars who are unable owing to their parents' change of residence to attend the Class in which they were originally registered ; and
 - (ii) Partial exemption scholars who are desirous of attending a course of instruction in Combined Domestic Subjects.

In these cases the Board must be satisfied that the transfer of a scholar from one Class to another will be consistent with continuous and progressive instruction.

- (b) Individual scholars may be allowed to attend particular lessons of a Class in which they are not registered, if they have missed the corresponding lessons in their own Classes, provided that their attendance does not increase the number present at any lesson beyond the limits specified by Rules 19 (b) or 23 (b) of these Regulations. Such attendances must be entered in a supplementary list and may not be reckoned for purposes of grant in either Class.

16. *Omitted.*

17. Students who are attending courses of training for Diplomas for Domestic Subjects at Training Schools recognised by the Board must, on request from the Authorities of the Training School, be allowed to attend any Class in Domestic Subjects for the purpose of practical instruction in teaching, or for observation, on such conditions as the Board may approve.

18. A scholar may be registered in not more than two Classes in any one subject in the same Special Subjects Year, provided that the Classes are not concurrent, and that the course of instruction in the second Class is more advanced.

Cookery, Laundry Work, Housewifery and Mixed Courses of Instruction in Domestic Subjects.

- 19. (a) Each lesson should as a rule include both demonstration and practice ; and not less than half the time must be assigned to practical work by the scholars with their own hands.
- (b) The scholars registered in any Class must not exceed 18 in number.
- (c) Subject to the exceptions allowed by Rule 14, the scholars registered in a Class must be girls over 11 years of age on the second day on which instruction is given to the Class.
- (d) With the special sanction of the Board, boys in seaport towns over twelve years of age may be registered in a Cookery Class.
- 20. (a) A teacher will be regarded as qualified to give instruction in Cookery to scholars in Public Elementary Schools either in Centre or School Classes if either—
 - (i) she holds a Full Diploma for Cookery recognised under the Regulations for the Recognition by the Board of Education of

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Schedule III.—(cont.)

Diplomas awarded by Training Schools in Domestic Subjects, 1906, or the Regulations for the Training of Teachers in Domestic Subjects, 1907 and later ; or

- (ii) she has been recognised under previous Codes as possessing a Full Diploma for Cookery ; or
 - (iii) she holds a Full Diploma for Cookery which would have rendered her eligible for recognition under previous Codes, and a satisfactory report upon her capacity as a teacher has been received from the Woman Inspector ; or
 - (iv) she holds a Certificate of qualification as a Teacher of Cookery under Chapter VI. of the Regulations for the Preliminary Education of Teachers issued by the Scotch Education Department.
- (b) A Certificated Teacher on the ordinary staff of a Public Elementary School will be regarded as qualified to give instruction in Cookery to the Scholars of that School if either—
- (i) she holds a Limited Diploma for Cookery recognised under the Regulations for the Recognition by the Board of Education of Diplomas awarded by Training Schools in Domestic Subjects, 1906, or the Regulations for the Training of Teachers in Domestic Subjects, 1907 and later ; or
 - (ii) she has been recognised under previous Codes as possessing a Limited Diploma for Cookery ; or
 - (iii) she holds a Limited Diploma for Cookery which would have rendered her eligible for recognition under previous Codes, and a satisfactory report upon her capacity as a teacher has been received from the Woman Inspector.
- (c) A teacher will be regarded as qualified to give instruction in Laundry Work to scholars in Public Elementary Schools if either—
- (i) she holds a Diploma for Laundry Work recognised under the Regulations for the Recognition by the Board of Education of Diplomas awarded by Training Schools in Domestic Subjects, 1906, or the Regulations for the Training of Teachers in Domestic Subjects, 1907 and later ; or
 - (ii) she has been recognised under previous Codes as possessing a Diploma for Laundry Work ; or
 - (iii) she holds a Diploma for Laundry Work which would have rendered her eligible for recognition under previous Codes, and a satisfactory report upon her capacity as a teacher has been received from the Woman Inspector ; or
 - (iv) she holds a Certificate of qualification as a Teacher of Laundry Work under Chapter VI. of the Regulations for the Preliminary Education of Teachers issued by the Scotch Education Department.
- (d) A teacher will be regarded as qualified to give instruction in Housewifery to scholars in Public Elementary Schools, if either—
- (i) she holds a Diploma for Housewifery recognised under the Regulations for the Recognition by the Board of Education of Diplomas awarded by Training Schools in Domestic Subjects, 1906, or the Regulations for the Training of Teachers in Domestic Subjects, 1907 and later ; or
 - (ii) she has been recognised under previous Codes as possessing a Diploma for Housewifery ; or
 - (iii) she holds a Diploma for Housewifery which would have rendered her eligible for recognition under previous Codes, and a satisfactory report upon her capacity as a teacher has been received from the Woman Inspector ; or
 - (iv) she holds a Certificate of qualification as a Teacher of Housewifery under Chapter VI. of the Regulations for the Preliminary Education of Teachers issued by the Scotch Education Department.
- (e) A Teacher will be regarded as qualified to give instruction in Mixed Courses in Domestic Subjects to scholars in Public Elementary Schools if she is qualified as a Teacher of Cookery, Laundry Work and Housewifery under (a) or (b), (c), and (d) of this regulation.

Schedule III.—(cont.)

21. Grant will be payable on account of each scholar registered in a Class—

- (a) A grant of 4s. for each scholar who has received at least 40 hours' instruction in Cookery.
- (b) A grant of 2s. for each scholar who has received at least 20 hours' instruction in Laundry Work.
- (c) A grant of 1s. 6d. for each scholar who has received at least 20 hours' instruction in Housewifery.
- (d) A Grant of 7s. 6d. for each scholar who has received at least 80 hours' instruction in a Mixed Course in Domestic Subjects (i.e., Cookery, Laundry Work and Housewifery).

Combined Domestic Subjects.

22. A course of instruction in Combined Domestic Subjects must include Cookery, Laundry Work and Housewifery, taught in such intimate connexion with each other and under such conditions as to provide a training in the general management of a home. The greater part of the course must be devoted to practical work by the scholars.

- 23. (a) Scholars registered in a Class in Combined Domestic Subjects must have previously received at least one full course of instruction in both Cookery and Laundry Work, or at least one full Mixed Course of instruction in Domestic Subjects.
- (b) The number of scholars registered in a Class must not exceed 18.
- (c) Subject to the exceptions allowed by Rule 14, the scholars registered in a Class must be girls over 12 years of age on the second day on which instruction is given to the Class.

24. A teacher will be regarded as qualified to give instruction in Combined Domestic Subjects if either—

- (i) she holds a Diploma in Combined Domestic Subjects, or Diplomas in Cookery, Laundry Work, and Housewifery recognised under the Regulations for the Recognition by the Board of Education of Diplomas awarded by Training Schools in Domestic Subjects, 1906, or the Regulations for the Training of Teachers of Domestic Subjects, 1907 and later; or
- (ii) she has been recognised under previous Codes as possessing Diplomas in Cookery, Laundry Work and Housewifery; or
- (iii) she holds Diplomas in Cookery, Laundry Work, and Housewifery which would have rendered her eligible for recognition under previous Codes, and a satisfactory report upon her capacity as a teacher has been received from the Woman Inspector; or
- (iv) she holds a Certificate of qualification as a Teacher of Housewifery under Chapter VI. of the Regulations for the Preliminary Education of Teachers issued by the Scotch Education Department.

25. A grant of 10s. will be payable on account of each registered scholar who has received at least 80 hours' instruction. A grant of 4s. 6d. will be payable on account of each registered scholar who has received at least 40 hours' instruction in a Class arranged with the previous approval of the Board for partial exemption scholars.

Not more than two grants will be payable in respect of any one scholar in the same Special Subjects Year.

DAIRY WORK.

26. Subject to the exceptions allowed by Rule 14 the scholars registered in a Class in Dairy Work must be girls who are over eleven years of age on the second day on which instruction is given to the Class.

27. Every scholar must be registered in a Class not later than the second day on which instruction is given to the Class, and no scholar may be added during the progress of the course.

28. Individual scholars may be allowed to attend particular lessons of a Class in which they are not registered, provided that their attendance does not increase the number present at any lesson beyond the limit specified by Rule 29 of these Regulations. Such attendances must be entered in a supplementary list, and may not be reckoned for purposes of grant.

29. There must be at least one teacher for every fourteen scholars.

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Schedule III.—(cont.)

30. A grant of 2s. will be payable on account of every complete 20 hours of recognised attendance made by each scholar registered in the Class, but not more than two grants of 2s. each will be paid in respect of the attendances made by any one scholar in the same Special Subjects Year.

HANDICRAFT.

31. Instruction should as a rule continue during the whole Special Subjects Year except in the case of a course recognised under Rule 36 (i) (c).

32. No attendances but those of boys who are over eleven years of age at the date of the first lesson *they attend* and are not partial exemption scholars are recognisable for the special grant.

Special arrangements (including arrangements for registration) may, with the previous consent of the Board, be made to meet the case of scholars who are unable to attend the Class in which they were originally registered, if the Board are satisfied that the transfer of a scholar from one Class to another will be consistent with continuous instruction.

33. Practical work at the benches should, as a rule, be done by the scholars from working drawings to scale, which should be made under the immediate supervision of the teacher of Handicraft, on principles which the scholar has learnt in the course of the ordinary school work.

34. (a) There must be at least one teacher for each twenty scholars working at the benches, or in the case of "light Wood-work" for each thirty scholars.

(b) A Handicraft Centre should, as a rule, have its own teacher or teachers. Where circumstances do not permit of the employment of a special teacher, scholars may be instructed in Handicraft with the approval of the Board, whether at their own School or at a Centre, by one of the regular teachers of the School, who, if not fully qualified, must have a skilled assistant.

35. A teacher will be regarded as qualified to give instruction in Handicraft to scholars in Public Elementary Schools, if he holds either the Teachers' Certificate in Manual Training (Wood-work or Metal-work) issued by the City and Guilds of London Institute, or the Teacher's Certificate in Wood-work or Metal-work issued by the Board of Examinations for Educational Handwork.

36. (i) —

(a) A grant of 7s. for each scholar will be payable in respect of each boy who has received instruction for two hours weekly during at least 30 weeks in the Special Subjects Year.

(b) A grant of 3s. 6d. for each scholar will be payable in respect of each boy entering or leaving the school during the Special Subjects Year, who is prevented thereby from receiving instruction during 30 weeks but has received instruction for two hours weekly during at least 20 weeks in the Special Subjects Year.

(c) A grant of 3s. 6d. for each scholar will be payable in respect of each boy who has received instruction at a Centre which has been opened during the Special Subjects Year, or at a School at which no Class in Handicraft was held in the previous year, provided that the course begins not later than the 1st February (or 1st October when the Special Subjects Year begins on 1st April), and that no grant is claimed for any scholar who has not attended for two hours weekly during at least 20 weeks in the Special Subjects Year.

(ii) A grant of 2s. 6d. for each scholar who has received instruction for two hours weekly during at least 30 weeks in the Special Subjects Year in "light Wood-work," will be payable in respect of a limited number of experimental classes for which the previous consent of the Board must be obtained in each case. If no other room is available, these classes may be held in an ordinary Class Room; short lessons and the use of prepared wood, light tools and simpler apparatus will be permitted.

GARDENING.

37. Instruction in Gardening should as a rule be arranged so that each scholar may do the work of a complete gardening year. It is generally desirable that instruction should commence not later than the middle of March.

Schedule III.—(cont.)

38. The Special Subjects Year for Gardening runs from 1st November to 31st October. All courses of instruction in this subject must be begun and completed in the same Special Subjects Year, and no attendances may be carried forward from one year to another.

39. (a) Subject to the exceptions allowed by Rule 14, the scholars registered in a Class must be over 11 years of age at the date of the first lesson they attend.

(b) Individual scholars may be allowed to attend particular lessons of a Class in which they are not registered, provided that their attendance does not increase the number present at any lesson beyond the limit specified in Rule 40. Such attendances must be entered in a supplementary list and may not be reckoned for purposes of the Special Grant.

40. There must, as a rule, be at least one teacher for every 14 scholars. In the case, however, of a two years' course of instruction where separate plots are worked by a first and second year scholar together, and in other cases where special circumstances make it desirable, if the consent of the Board has been obtained beforehand, a few additional scholars may be registered, provided that in no case does the total number of scholars taught by one teacher at any time exceed 20, and that the special Grant is claimed in respect of not more than 14 of these scholars.

41. A grant of 2s. may be claimed on account of every complete 20 hours of recognised attendance at practical work in Gardening made by each scholar registered in the Class and qualified under Rule 40 for payment of grant, but not more than two Grants of 2s. each will be paid in respect of the attendances made by any one scholar in the same Special Subjects Year.

SCHEDULE III.

B.

Regulations for the Teaching of Special Subjects,
for which a Block Grant is payable under
Article 34 (b).

The regulations of Schedule III. A. apply in all respects except that certain articles are modified and certain other articles (the numbers of which are specified below) are omitted.

(The modified articles are printed in full below, changes being indicated in italics as far as possible.)

1. Courses of instruction in Special Subjects must be begun and completed in the same Special Subjects Year. In the case of Gardening the Special Subjects Year runs from November 1st to October 31st. In the case of all other subjects the Special Subjects Year runs from August 1st to July 31st. Where, however, the Summer holidays ordinarily end before the 1st August or begin after the 31st July, courses may be begun or completed, as the case may be, before or after those dates.

Where the Local Education Authority have adopted a uniform Educational Year running from the 1st April to the 31st March for all Schools in their area, the 31st March may, with the previous consent of the Board, be substituted for the 31st July, and the 1st April may be substituted for the 1st August, and the word "Easter" may be substituted for the word "Summer" in this regulation; and the Board may make in the conditions and rate of the grants payable under this Schedule any adjustment required by such substitution.

7. As a rule, the Time Table of each course of instruction in Special Subjects, other than Gardening, must provide for not less than two hours' instruction weekly, exclusive of any interval for recreation, during the period covered by the course; each lesson should, as a rule, occupy not less than two hours. A short interval for recreation may be given during any lesson.

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Schedule III.—(cont.)

8. Every syllabus of instruction *should show the length of the proposed course, and must be submitted to the Inspector before the instruction begins; or the Inspector must be informed that a previously approved syllabus will again be used. The Board may require the modification of any syllabus which is unsuitable.*

The Local Education Authority should as early as possible in the year inform the Board of any general instructions given to Head Teachers with regard to the selection of scholars for classes in Special Subjects, and should submit for the approval of the Board a copy of the Register in use, together with a statement of the arrangements made to secure continuous and progressive instruction for scholars transferred from Class to Class or Centre to Centre. The Authority shall also furnish the Board with any returns which the Board may from time to time require in order to test the quantity and quality of the instruction.

13. Where the instruction is reported to be defective or any of the conditions have not been complied with, the Board may, if they think fit, pay the grant with or without deduction.

14. The normal age at which scholars may be registered in Classes in Special Subjects is that given in the particular rule relating to each subject (Rules 19 (c), 23 (c), 26, 32 and 39 (a)); but in exceptional circumstances a few scholars who have not reached the normal age may be registered, provided that—

- (a) they are physically fit to take advantage of the instruction given;
- (b) their inclusion in the Class is directly conducive to the better organisation of the ordinary school work;
- (c) their presence in the Class does not interfere with the instruction of the older scholars; and
- (d) adequate provision has been made for the instruction in that subject of children in the school of the normal age, irrespective of their position in the school.

15. Every scholar must be registered in a Class not later than the *second day on which instruction is given to the Class, and no scholar may be added during the progress of the course except scholars transferred in accordance with arrangements approved by the Board under Rule 8 from another Class, or partial exemption scholars desirous of attending a Class in Combined Domestic Subjects.*

Individual scholars may be allowed to attend particular lessons of a Class in which they are not registered, if they have missed the corresponding lessons in their own Classes, provided that their attendance does not increase the number present at any lesson beyond the limits specified by Rules 19 (b) or 23 (b) of these Regulations. Such attendances must be entered in a supplementary list.

18. *Omitted.*

21. *Omitted.*

25. *Omitted.*

DAIRY WORK.

28. Individual scholars may be allowed to attend particular lessons of a Class in which they are not registered, provided that their attendance does not increase the number present at any lesson beyond the limit specified by Rule 29 of these Regulations. Such attendances must be entered in a supplementary list.

30. *Omitted.*

HANDICRAFT.

31. Instruction should as a rule continue during the whole Special Subjects Year.

32. Subject to the exceptions allowed by Rule 14, scholars registered in a Class should be over 11 years of age

36. (i) *Omitted.*

36. (ii) *Omitted.*—See note at the foot of this schedule.

GARDENING.

39. (a) Subject to the exceptions allowed by Rule 14, the scholars registered in a Class must be over 11 years of age at the date of the first lesson they attend.

Schedule III.—(cont.)

- (b) Individual scholars may be allowed to attend particular lessons of a Class in which they are not registered, provided that their attendance does not increase the number present at any lesson beyond the limit specified in Rule 40. Such attendances must be entered in a supplementary list.

40. There must, as a rule, be at least one teacher for every 14 scholars. In the case, however, of a two years' course of instruction where separate plots are worked by a first and second year scholar together, and in other cases where special circumstances make it desirable, if the consent of the Board has been obtained beforehand, a few additional scholars may be registered, provided that in no case does the total number of scholars taught by one teacher at any time exceed 20.

41. *Omitted.*

Note.—In addition to the Block Grant payable under Article 34 (b), a separate grant in respect of instruction in Light Wood-work will be payable on the conditions stated in Rule 36 (ii) in Schedule III. A.

SCHEDULE IV.

Regulations as to School Records and Registration.

1. Every school must have—

- (a) A Diary or Log Book, which should be a bare record of the events which constitute the history of the school.

The Log Book should be stoutly bound and contain not less than 300 ruled pages. It must be kept at the school under the care of the Head Teacher. He should enter in it, from time to time, such events as the introduction of new books, apparatus, or courses of instruction, any plan of lessons approved by the Board, the visits of managers, absence, illness, or failure of duty on the part of any of the school staff, or any special circumstance affecting the school that may, for the sake of future reference or for any other reason, deserve to be recorded. *The provisions of Article 23 must be observed, and the Local Education Authority may also direct that the reports made to them by their Committees, or by their Inspectors, or by other officers, shall be entered in the Log Book; but otherwise the Log Book should contain statements of fact only, and should contain no expressions of opinion on conduct or as to the efficiency of the school.*

Entries in the Log Book should be made by the Head Teacher as occasion may require. Entries should be made only by the Head Teacher, by the Correspondent, by the Managers who check the registers, or by the officer (if any) authorised by the Local Education Authority.

The Log Book should contain an explanation of the reason for the closing of the school on all occasions on which it is closed. It should also contain an account of all important variations in the attendance, and all deviations from the ordinary routine of the school.

- (b) a book for recording Minutes of Managers' Meetings ;
(c) a portfolio to contain official letters ;
(d) the Code of the Board of Education in force for the time being ;
(e) a Punishment Book in which all cases of corporal punishment must be recorded.

Registers.

2. Every school or department must have—

- (a) a register of admission and withdrawal ;
(b) attendance registers ;
(c) a partial exemption register if necessary ; and
(d) a register of summaries.

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Schedule IV.—(cont.)

General Rules for the use of Registers.

3. The names of the school, of the department, and, in the case of attendance registers, of the class, must be distinctly written on the cover of each register; and on the title page there must be the signature of the correspondent and the date on which the register was issued to the teacher.

4. The pages of all registers must be numbered consecutively, no leaf must be inserted in or withdrawn from any register, and no blank spaces should be left between the entries.

5. Entries must be original and not copies, and must be made in ink without erasure or insertion.

If it is necessary to make any correction this should be done in such a manner that the original entry and the alteration made are both clear on the face of the record.

During any time in which school registers are with the Board for inspection, under Article 48, the record of attendances made by each scholar must be kept in a temporary register, and the totals of such attendances must be transferred to the original registers as soon as these are returned by the Board. The temporary register must be preserved.

6. Registers should be kept for ten years after they have been filled.

The Head Teacher of a school or department is held responsible for the proper keeping and preservation of the records of that school or department, and should not delegate to a subordinate any part of this work except the keeping of attendance registers.

Pupil-teachers of the first year may not be employed in registration; other pupil-teachers may register the attendances of their own classes.

Special Rules for Admission Register.

7. An entry should be made in the admission register for each scholar on the first day on which he attends the school or department. No name should be removed while the child is under the legal obligation to attend school, unless, either (a) it has been ascertained that he or she is dead, is attending another school, or has left the neighbourhood, or (b) the School Medical Officer has certified that in his opinion there is no likelihood of the child being in a fit state of health to attend school before becoming legally exempt from the obligation of school attendance. If no information is obtainable the name may be removed after a continuous absence of four weeks.

8. Successive numbers must be allotted to the scholars on their admission so that each may have his own number which he should retain throughout his career in the school or department. This number will then serve to identify him.

When any scholar whose name has been removed from the register is re-admitted, a new entry must be made, but the scholar should resume his old number, and cross reference should be made to the entries.

9. This register must show distinctly for each scholar who has actually been present in the school or department—

(a) his number on the register.

(b) the date of his admission (and re-admission)—day, month, and year.

(c) his name in full.

(d) the name and address of his parent or guardian.

(e) whether exemption from religious instruction, or from attendance at the school during the time of religious instruction where the byelaws permit this, is claimed on his behalf.

(f) the exact date—day, month, and year of his birth.

(g) the last school he attended before entering this school. If this is his first school, the word "none" should be entered in this column.

(h) if he has left, the date of his last attendance at this school and the cause of his leaving.

10. This register should have an alphabetical index.

Rules as to the Provision of Attendance Registers.

11. (Cancelled).

12. For each class in a school or department there should be a separate attendance register containing the names of all children in the class including the partial exemption scholars.

Schedule IV.—(cont.)

13. Each class containing children above and below the age of five years must have two registers, one for those above, the other for those below that age, and similarly for classes containing scholars above and below the age of fifteen years.

The name of a scholar must be transferred from one of these to the other not later than the end of the week in which he attains his fifth, or fifteenth birthday, as the case may be.

Registers for Special Subjects.

14. (a) A Special Register must be kept for every subject in which secular instruction according to the approved Time Table is given under Article 44 (a) to the scholars of a Public Elementary School elsewhere than at the School.
- (b) A Special Register must be kept for every subject of instruction for which a Special Grant is made under Article 34 and Schedule III., whether such instruction is given at a Public Elementary School or elsewhere.
- (c) Every Class instructed in any subject under Schedule III. must be separately entered in the Special Register, under its indicative letter, together with the name and qualification of the teacher, the number of hours of instruction to be given, and the dates and times at which the meetings are to be held. Any alterations subsequently made in these dates and times should be shown in red ink.
- (d) The name of every scholar registered in a Class under Schedule III. must be entered in a special Register not later than the second day on which instruction is given to the Class (or in the case of Handicraft or Gardening before the first lesson which the scholar attends), together with the date of birth of such scholar and the Public Elementary School to which he belongs and a statement of any courses of instruction in the same special subject that have been previously taken by him.
- (e) All attendances made by each scholar registered in a Class must be marked in such a way as to show the actual number of hours during which that scholar has been under instruction.
- (f) A supplementary list must be kept in the Special Register of all attendances made in a Class by scholars not registered in that Class for the purpose of receiving lessons which they have missed in the Classes in which they are registered.
- (g) If any scholar registered in a Class for a Special Subject ceases to attend a Public Elementary School before the completion of the course of instruction, the fact and the date must be recorded in the Special Register.
- (h) Subject to these requirements, the Special Registers should be kept in accordance with Rules 3 to 6 and 15 to 23, so far as these are applicable.

Special Rules for Attendance Registers.

15. There must be columns for the admission numbers and names of the scholars, both of which must invariably be entered at the same time.

There must be a column for the attendances at each meeting in the school year. Each of these columns should be properly dated before any entry of attendance or absence is made in it. The columns must be grouped in weeks, and at the foot of each there should be spaces for entering the total number of children present, when the registers are marked for the last time, and the total number withdrawn before completing an attendance for the purposes of grant.

There must be spaces for recording the total attendances made by each child in the quarter. If the school is worked in terms, the total attendances made by individual scholars may be recorded for terms instead of quarters.

16. If school fees are entered in the register, they should be kept quite separate from the entries of attendances; the best place will be the extreme left of the page before the names of the scholars.

17. The approved time table must provide adequate time at each meeting of the school or department for marking the registers, and the time table must show that after the end of this time at least one and a half hours, or at least two hours, of secular instruction will be given to infants and other scholars respectively.

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Schedule IV.—(cont.)

The attendance registers should be marked for the first time as soon as the school or department is open according to the time table. No instruction received by a scholar before the register is marked for the last time may be reckoned towards the minimum amount of secular instruction required in order that an attendance for the purposes of grants under this Code may be counted.

The marking of the registers for the afternoon meeting may not begin within an hour of the close of the morning meeting, except on occasions for which the special sanction of the Board has been given to a shorter interval. This proceeding is very undesirable, but special cases may occur, such as those of country schools in the North during the winter, where there is good reason for making the afternoon meeting of the school follow the morning meeting after a short interval.

18. During the time set apart for registration at every meeting of the school or department—Every Scholar whose name has been entered in and not removed from the admission register must be marked \ (present) or ○ (absent).

Before the completion of the time set apart for registration the number of scholars marked present must be entered in the space provided, and to ensure accuracy a count of those actually present should be made before the number is recorded.

19. During the minimum period of secular instruction required in order that an attendance may be reckoned for the purpose of grant—

The mark of presence of any scholar who leaves before receiving one and a half hours, or two hours, of secular instruction must be cancelled at once by

drawing a ring round it thus, ○

But this need not be done in the case of a scholar leaving the school for instruction in a special class held outside the school, unless it is subsequently ascertained that such scholar has not received two hours of secular instruction.

The number of the scholars whose marks of attendance have been cancelled must be entered in the space provided before the end of the meeting.

20. Any scholar marked absent at any meeting who is found—when the registers of a central class for cookery, drawing, science, &c., or the registers of attendance at museums or other approved places are examined—to have received, at the time of that meeting, at least two hours of secular instruction at such class or partly at such class and partly at the school, may have the letter C, D, S, M, A, &c.

entered inside the mark of absence, thus ○ C ○ D ○ S ○ M ○ A

All attendances so registered should be added to the total attendances of each child concerned at some time not later than the end of the school year.

21. When a child is excluded from the school by reason of a requirement under Article 57 of the Code, or any provision of an Act of Parliament, or under the authority of the School Medical Officer, his mark of absence should be entered

thus, ○ X the X being added in red ink.

At every meeting at which a scholar is employed as a Monitor, he must be marked thus ○ Z (see Articles 11 (f) and 43 (e)).

22. When the school does not meet on an occasion for which space is provided in the registers, this space must before the next meeting be cancelled by one or more lines being plainly drawn through it. The reason why the school did not meet should always appear in the log book. For longer periods "holiday" should be written across the column.

Schedule IV.—(cont.)

23. The attendance registers must be marked every time the school meets, however small the attendance, and the meeting must be counted in ascertaining the average attendance.

N.B.—In country districts, where the children have to come from some distance to attend school, a meeting of the school may occasionally be abandoned without previous notice on days when, owing to inclement weather, the attendance is so small as seriously to interfere with the ordinary working of the school.

In such a case, the children who reach the school so wet that sitting in school for the usual school hours is likely to be injurious to their health should be sent home at once. The children not likely to be injured by remaining for the usual school hours may be admitted and allowed to receive instruction without the registers being marked or the meeting reckoned. Whenever this is done, an entry must at once be made on the register to the effect that the meeting has been abandoned, full particulars of the circumstances must be entered in the log-book, and a record should be kept of the numbers respectively sent home and retained in school.

Rules for the use of the Partial Exemption Register.

24. A separate register must be provided for partial exemption scholars. The name of no scholar should be entered in this unless he is ascertained to be a partial exemption scholar as defined by Article 43 of the Code.

25. At the close of each week, the number of the two-hour attendances made by each of the partial exemption scholars during the week must be ascertained from the class registers and posted in the partial exemption register.

26. At the end of the year a list must be drawn up and signed on behalf of the Local Education Authority, certifying (a) the number of two-hour attendances made by each partial exemption scholar, (b) the addition claimed on his behalf. This addition may not exceed—

- (i) *One-half* of the two-hour attendances made by the scholar during the year or that portion of the year during which he has been a partial exemption scholar; nor
- (ii) Such a number as when added to the number of his two-hour attendances during the year or that portion of the year during which he has been a partial exemption scholar, will give a total equal to the number of meetings of the school during the same period.

Rules as to the Register of Summaries.

27. All entries in the register of summaries, whether for a class or for the whole department, must be given separately for scholars below and above the age of five years, and for those below and above fifteen years of age.

28. At the close of each week or part of the week during which the school has been open the following entries must be made in the register of summaries in respect of that period—

- (1) The number of meetings of each department.
- (2) The total attendances of each class.
- (3) The total attendances of each department.
- (4) The average attendance of each department.
- (5) Highest number on the roll during the week.

29. At the end of the school year the average attendance for the year should be ascertained for each section of a school or department for which a separate grant on average attendance is payable by dividing the total attendances made in that year by the number of meetings of the corresponding section of the school or department.

The average attendance of scholars above the age of 15 years must be separately ascertained for the purposes of grant, since no fee grant is payable in respect of scholars over 15 years of age. The average attendances for children below and above the age of five years must also be separately ascertained but are not required for the purpose of the payment of grant, except for the purposes of Article 31.

30. An entry must be made in the register of summaries of the classification of the children of each sex according to their ages on the last day of the school year.

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*Schedule IV.—(cont.)**Verification of the Registers.*

31. The Managers are held responsible for the supervision and effective verification of the registration, and at the end of the school year are required to certify—

- (1) that the registers have been accurately kept in accordance with the rules of this Schedule; and
- (2) that the accuracy of the registers has been tested by the Managers on several occasions and the result recorded in the log book.

32. In order to be able to give this certificate and properly to check the registration, Managers are expected to visit the school without notice, at least once in a quarter, at some time during the period of secular instruction required in order that an attendance may be counted for grant, so that they may see that the registers have been properly marked and closed in accordance with the requirements of the Code and of this Schedule.

33. In the case of a School which, under Section 6 of the Education Act, 1902, has no Managers, a responsible officer appointed by the Local Education Authority must discharge the duties named in Rules 31 and 32.

*SCHEDULE V.**Regulations as to the Payment of Fee Grant.*

1. The Fee Grant in respect of a School will be paid as follows:—

(i) After each three months completed during (but before the close of) the school year, there will be paid an instalment calculated at the rate of two shillings and sixpence per scholar on the average attendance for the preceding School year;

(ii) The balance of the grant for the School year will be paid with the Annual Grant or balance of Annual Grant for that year.

2. Where an existing School not previously in receipt of the grant commences to satisfy the conditions of the Act from a date other than the first day of a School year, instalments will not commence to be payable until after three complete months have elapsed from that date.

3. Where the first "School year" of a new School is a period less than twelve months, no grant will be paid until the termination of that "School year." Each of the instalments in the second School year will be equal to one fourth of the grant for the first School year.

SCHEDULE VI.

REGULATIONS AS TO CERTIFICATES OF PROFICIENCY.

PART I.

Extract from the Revised Regulations of March 21st, 1901.

Certificates of Proficiency.

1. Certificates of proficiency are certificates of having reached or passed any Standard prescribed by the Code. To reach or pass a Standard a child must be individually examined in reading, writing, and arithmetic in that or a higher Standard, and must pass in each of those subjects.

2. At any visit of an Inspector to any public elementary or other certified efficient school, the managers are required to admit to examination, and the Inspector to examine for a certificate of proficiency, any child over twelve years, or if the child is to be employed in agriculture under any byelaw made under section 1, Elementary Education (School Attendance) Act, 1893, Amendment Act, 1899, over eleven years of age, whether a scholar in the school or not, if the child's parent or guardian or the local authority apply for the child to be examined for such a certificate; but the Inspector is at liberty to refuse to examine any child for whose examination due provision is made elsewhere, or any child who has not been instructed for at least six months in the Standard in which he is presented, or who has failed in that Standard at an examination held in the previous three months.

3. The Inspector may, in concert with the local authority, hold such special examinations as he may think necessary of children over eleven years of age, whom their parents or guardians or the local authority wish to be examined for certificates of proficiency.

PART II.

Methods of Examination.

4. These examinations are not intended to be used for testing the general attainments of scholars in Public Elementary Schools, and candidates will not be admitted to the examination by the Inspectors unless the Inspectors are satisfied that they are presented for examination for the purpose of obtaining certificates of proficiency.

5. Reading may be tested by means either of the ordinary school reading-books or by means of reading-books selected by the Inspector. Children presented in the Fourth, or any lower Standard, may be expected to read fluently either simple stories or suitable passages taken from such books as are commonly used in school-work. Children presented in the Fifth or any higher Standard should have overcome the mechanical difficulties of reading the words commonly met with in modern English prose. In the case of the higher Standards a reasonable amount of fluency, correct expression, and some comprehension of the passages read, may also be looked for.

6. Writing will in general be tested by means of composition exercises selected by the Inspector as suited to the Standard of presentation, but children who are presented in any Standard below the Fifth will have the option of being examined in dictation. Any exercise, which may be given in dictation, will consist of not more than eight lines, slowly and clearly dictated, from a school reading-book or from some other book written in language suited to the comprehension of children. In the case of the Fourth and Fifth Standards the composition exercises will be of a very simple character, and they will generally consist of descriptions of objects, places, or events with which the children are familiar. In the case of the Sixth and Seventh Standards, also, the composition exercises will often consist of descriptions of things of which the children have a first-hand knowledge, but short biographies of persons whose lives have been studied in connection with History lessons, descriptions of the more striking places dealt with in Geography lessons, and reproductions of simple lessons in Elementary Science, may also be asked for.

7. The examination in arithmetic will be conducted in accordance with the syllabus annexed to these regulations. Children who are presented in the

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Schedule VI.—(cont.)

Seventh Standard will be examined in the whole of this syllabus; those presented in the Sixth Standard will be examined in Sections A.B.C.D.E. and F.; those presented in the Fifth Standard in Sections A.B.C. and D. (i); those presented in the Fourth Standard in Sections A. and B. (i) (ii) (iii) (iv) and (v). In the case of children presented in the Third Standard the examination will be confined to Section A. and to the easier parts of Section B.

Long exercises in addition or multiplication will occasionally be set as tests of accuracy, but as a rule the sums set will not involve large numbers. A reasonable choice of questions will always be allowed and the work of girls will be judged more leniently than that of boys.

PART III.

*Syllabus of Examination in Arithmetic.*A. *Simple Quantities.*

Addition, subtraction, multiplication, and division.

B. *Compound Quantities.*

Addition, subtraction, multiplication, and division of the following:—

- (i) (Money) farthings, pence, shillings, pounds.
- (ii) (Weight) ounces, pounds, stones, quarters, hundredweights, tons.
- (iii) (Length) inches, feet, yards, chains, furlongs, miles.
- (iv) (Capacity) pints, quarts, gallons, pecks, bushels, quarters.
- (v) (Time) seconds, minutes, hours, days, years.
- (vi) (Area) square inches, square feet, square yards, acres, square miles.
- (vii) (Volume) cubic inches, cubic feet, cubic yards.

N.B. Children should know:—

- (a) The seven tables connecting these compound quantities.
- (b) The number of days in each calendar month, and
- (c) The weight of a gallon of water (*i.e.*, ten pounds) and approximate weight of a cubic foot of water (*i.e.*, 1,000 ounces).

C. *Vulgar Fractions.*

Notation; the expression of one simple or compound quantity as the fraction of another; the addition and subtraction of simple and compound quantities containing fractions; the multiplication and division of simple and compound quantities, and of fractions of simple and compound quantities by numbers containing fractions.

D. *Mensuration.*

- (i) The mensuration of rectangles and rectangular solids.
- (ii) The mensuration of triangles whose bases and altitudes are known.

N.B.—The extraction of square and cube roots will not be required. The mensuration of circles will be included in the work assigned to the Sixth Standard, and the mensuration of cones and cylinders in that assigned to the Seventh Standard.

E. *Simple "Proportion"; "Bills of Parcels."*F. *Decimals.*

The method of representing tenths, hundredths, thousandths, &c., by figures to the right of the decimal point; the multiplication and division of numbers containing decimals by 10, 100, 1,000, &c.; the addition, subtraction, multiplication, and division of simple and compound quantities containing decimals; the evaluation of a given decimal fraction of a given simple or compound quantity; the expression of one simple or compound quantity as the decimal fraction of another; the conversion of a vulgar fraction to a decimal fraction; the expression of a terminating decimal as a vulgar fraction.

N.B.—In no case need answers be carried to more than three decimal places; children presented in the Sixth Standard will only be expected to work easy examples in decimals.

G. *Percentages and Interest.*

The meaning of the term "per cent."; the calculation of a given percentage of a given simple or compound quantity; the calculation of the interest on a given sum for a given time at a given rate.

KEY TO MODIFICATIONS OF THE CODE OF 1909.

- (A) Articles of the 1909 Code which are cancelled in the 1912 Code—11 (b), 13, 31, 42 (c) and 46 (b). Also Schedule I. E.
- (B) Articles of the 1909 Code which are modified in the 1912 Code—2, 7 (b), 8, 9 (a) (iii), 9 (e), 10, 11 (e), 12, 14, 16, 17 (c), 25, 28 (a), 30 (a), 31*, 32, 33, 34, 40 (e), 41 (a), 43 (a) and (b), 44 (b), (f) and (g), 45, 57 and 58 (b). Also Schedules I., II., III. and IV.
- (C) New Articles established in the 1912 Code—12 (c) and 34 (b). Also Schedule III. B.

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BOARD OF EDUCATION.

1912.

CODE OF REGULATIONS

FOR

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SCHOOLS IN ENGLAND

(Excluding Wales and Monmouthshire),

WITH

SCHEDULES.

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BOARD OF EDUCATION.

REGULATIONS

under which

Grants in respect of the medical inspection and medical treatment of children attending Public Elementary Schools and the medical treatment and care of children attending certain Special Schools in England and Wales will be made by the Board of Education during the year ending March 31st, 1915.

Presented to both Houses of Parliament by Command of His Majesty.



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NOTE.—These Regulations take the place of the Regulations issued in August 1913, and are identical with them except for the necessary changes of dates.

BOARD OF EDUCATION.

Grants in respect of the medical inspection and medical treatment of children attending Public Elementary Schools and the medical treatment and care of children attending certain Special Schools.

PART I.

CHILDREN ATTENDING PUBLIC ELEMENTARY SCHOOLS.

1. The Board of Education will make grants to Local Education Authorities during the financial year ending on the 31st March 1915 in respect of the medical inspection and medical treatment of children attending Public Elementary Schools and work ancillary to medical treatment.

2. Grant will be assessed on the basis of the work done and the payments made by the Local Education Authority during the year ending on the 31st March 1914.

3. Where, in the Board's opinion, the provision made for the School Medical Service is adequate and its working is efficient, grant will be paid at a rate of one-half of the expenditure; in other cases the Board may either pay at a lower rate or withhold the grant.

4. In fixing the rate of grant, the Board will take into consideration the scope, character and efficient working, as ascertained by the Board from reports made by their Medical Officers or otherwise, of the Authority's provision and arrangements—

- (a) for the medical inspection of the groups of children prescribed by Article 58 (b) of the Code of Regulations for Public Elementary Schools;
- (b) for following up cases of defect found in the course of medical inspection;
- (c) for securing the medical treatment of cases requiring it;
- (d) for co-ordinating the work of the School Medical Service with the work of the Public Health Service in the area;
- (e) for rendering the School Medical Service an integral part of the system of Elementary Education in the area.

5. As soon as possible after the 31st March 1914, the Board will require to receive (a) a statement in an approved form of the payments actually made in respect of the Authority's School Medical Service during the year ending on that date, and (b) a

statement in an approved form showing the provision made by the Authority for medical inspection, and their scheme of treatment and work ancillary to treatment for the year ending on the 31st March 1915, together with a detailed estimate of the expenditure for that year.

PART II.

CHILDREN ATTENDING CERTAIN SPECIAL SCHOOLS.

6. The Board of Education will make grants to Local Education Authorities and to Managers of certain Special Schools during the financial year ending on the 31st March 1915 in respect of the medical treatment and care of children suffering from tuberculosis or other ailments for which open-air treatment is specially suitable, in attendance at Day or Residential Open-air Schools certified by the Board of Education under the Elementary Education (Defective and Epileptic Children) Act, 1899, and conducted in accordance with the Board's Regulations applicable to Schools for Blind, Deaf, Defective, and Epileptic Children.

7. The grants made under these Regulations will be in addition to the grants payable under the Regulations applicable to Schools for Blind, Deaf, Defective, and Epileptic Children.

8. Grant will be assessed on the basis of the work done during the year ending on the 31st March 1914.

9. The maximum grant payable will be at the rate of 3*l.* per unit of average attendance in the case of Day Schools, and at the rate of 8*l.* per unit of average attendance in the case of Residential Schools, the average attendance being calculated in each case for the year ending on the 31st March 1914. Grant will only be paid at this rate where the Board consider that the arrangements for the medical treatment and care of the children are satisfactory. Where this is not the case, the Board may withhold the grant or, if they think fit, pay grant at a lower rate.

10. Local Education Authorities and Managers of Special Schools applying for grant under this Part of the Regulations in respect of children attending Special Schools provided by them, must furnish a detailed statement of the arrangements made for the medical treatment and care of the children and a statement of the payments actually made under these arrangements during the year ending on the 31st March 1914. The statements should be furnished as soon as possible after that date.

GENERAL.

11. Payment of grant under these Regulations is subject to the fulfilment of the conditions laid down in the Regulations,

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but if any of these conditions have not been fulfilled, the Board may nevertheless, when there are special circumstances which would justify it, pay such grant as they may think fit.

12. In assessing grant the Board may disregard any items of expenditure which, in their opinion, should not be taken into account for the purpose of the assessment.

13. If any question arises as to the interpretation of these Regulations, or as to the fulfilment of the conditions of grant, the decision of the Board shall be final.

Given under the Seal of the Board of Education the
17th day of March, 1914.

(L.S.)

L. A. SELBY-BIGGE.

BOARD OF EDUCATION.

MINUTE

OF THE

BOARD OF EDUCATION

Dated the 27th June, 1910,

MODIFYING THE REGULATIONS
APPLICABLE TO SCHOOLS FOR BLIND,
DEAF, DEFECTIVE AND EPILEPTIC
CHILDREN,

dated the 19th of July, 1909.

Presented to Parliament by Command of His Majesty.



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(Reprinted 1914.)

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BOARD OF EDUCATION.

MINUTE of the BOARD OF EDUCATION, dated 27th June, 1910.

Articles 16(c) and 17(c) of the Regulations applicable to Schools for Blind, Deaf, Defective and Epileptic Children, dated the 19th of July 1909, are hereby withdrawn, and the following Articles are substituted :—

16(c).—(i) A teacher who has been recognised under previous Regulations as the Head Teacher of a School for Blind Children may continue to be recognised as the Head Teacher of that School, and is eligible for recognition as the Head Teacher of any other School for Blind Children.

(ii) The Board may accept as the Head Teacher of a School for Blind Children a teacher not recognised as Certificated, who has been recognised as an Assistant Teacher in a School or Schools for Blind Children for a period of ten years before the 1st of August 1910, provided that the Board are satisfied that such teacher is personally qualified to discharge efficiently the duties of Head Teacher of a School for Blind Children.

17(c).—(i) A teacher who has been recognised under previous Regulations as the Head Teacher of a School for Deaf Children may continue to be recognised as the Head Teacher of that School, and is eligible for recognition as the Head Teacher of any other School for Deaf Children.

(ii) The Board may accept as the Head Teacher of a School for Deaf Children a teacher not recognised as Certificated, who has been recognised as an Assistant Teacher in a School or Schools for Deaf Children for a period of ten years before the 1st of August 1910, provided that the Board are satisfied that such teacher is personally qualified to discharge efficiently the duties of Head Teacher of a School for Deaf Children.

Given under the Seal of Office of the Board of Education on Monday the 27th June, Nineteen hundred and ten, and presented to Parliament pursuant to the 97th Section of the Elementary Education Act, 1870, to lie on the Tables of both Houses for one month.

ROBERT L. MORANT.

(L.S.)

BOARD OF EDUCATION.

MINUTE

OF THE

BOARD OF EDUCATION,

Dated the 17th July 1914,
Modifying the Regulations applicable
to Schools for Blind, Deaf, Defective
and Epileptic Children, dated the
19th of July 1909, as already
modified by the Minute dated
27th June 1910.

Presented to both Houses of Parliament by Command of His Majesty.



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PREFATORY NOTE.

1. The main purposes of this Minute are---

- (a) To provide for the payment as from the 1st April 1914 of increased grants for Schools for Blind, Deaf, Defective and Epileptic Children.
- (b) To establish a uniform School Year commencing on the 1st April 1915.

2. The effect of the Minute on the date of payment of grant will be generally as follows :—

- (a) During the Financial Year commencing on the 1st April 1914 grants will be paid in respect of School Years ending between the 30th April 1914 and the 31st December 1914 inclusive.
- (b) During the Financial Year commencing on the 1st April 1915 grants will be paid in respect of School Years ending between the 31st January 1915 and the 31st March 1915 inclusive, and also for all broken periods ending on the 31st March 1915.
- (c) During the Financial Year commencing on the 1st April 1916 grants will be paid in respect of the uniform School Year ending on the 31st March 1916.

3. The reference in Articles 19 (e) and 25 (e) to the non-payment of grant for children committed to a Certified School under the provisions of the Children Act, 1908, appears for the first time in the Regulations, but does not involve any change in the existing practice, as the Board have always required that the attendances of such children shall be excluded from the claims for grant in view of the fact that grant for them is payable by the Home Office.

4. Attention is also drawn to Article 25 (f), which provides that as from the 1st April 1914 no grants will be paid under these Regulations by the Board of Education in respect of children for whom a maintenance grant is now payable by the Local Government Board under a scheme for the institutional treatment of tuberculosis.

MINUTE OF THE BOARD OF EDUCATION DATED
17TH JULY, 1914.

REGULATIONS APPLICABLE TO SCHOOLS FOR BLIND, DEAF,
DEFECTIVE AND EPILEPTIC CHILDREN.

Articles 10, 19, 25, and 26 of the Regulations applicable to Schools for Blind, Deaf, Defective and Epileptic Children, dated 19th July 1909, are hereby withdrawn, and the following Articles are substituted:—

10.—(a) The grants payable for Special Schools are those specified in Articles 19 and 25 of this Minute. These grants will be paid as from the 1st April 1914.

(b) The grants in respect of school years ending on the 30th April 1914, and on subsequent dates up to and including the 28th February 1915, will be paid in respect of the period up to the 31st March 1914 in accordance with Articles 19, 25, and 26 of the Regulations of the 19th July 1909, and in respect of the period from the 1st April 1914 in accordance with Articles 19 and 25 of this Minute.

(c) The grants in respect of school years ending on the 31st March 1915 will be paid in accordance with Articles 19 and 25 of this Minute.

(d) With a view to introducing a uniform school year ending on the 31st March for all Special Schools, grants for schools whose school years at present end on dates other than the 31st March will be paid in accordance with Articles 19 and 25 of this Minute for periods ending in each case on the 31st March 1915.

(e) As from the 1st April 1915 the grants for all Special Schools will be paid in respect of a uniform school year ending on the 31st March.

(f) In the case of a breach of any of the conditions of these Regulations, the Board may, when there are special circumstances which would justify it, pay the full grant or a portion of it, notwithstanding anything in these Regulations to the contrary.

19.—(a) The grant payable each year for a Certified School for blind or deaf children is as follows:—

(i) At the rate of 7*l.* for each unit of average attendance in a Certified Day School.

(ii) At the rate of 13*l.* for each unit of average attendance in a Certified Boarding School.

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(b) The average attendance for any period for which grant is payable is obtained by dividing the total number of attendances made in that period by the number of meetings of the School during the period, a fraction of a unit being ignored or reckoned as an additional unit according as it is, or is not, less than one-half.

(c) If the period for which grant is payable is longer or shorter than a school year, the average attendance on which the grant is calculated will be altered in proportion to the length of that period reckoned in months and days of a month.

(d) In calculating the average attendance, no attendances shall be included which are made by children while under five or over sixteen years of age.

(e) No grants will be paid under these Regulations in respect of children committed to a Certified School under the provisions of the Children Act, 1908, and for whom a Treasury contribution is claimable from the Home Office. Consequently the attendances of such children must be disregarded in calculating the average attendance for the purpose of claiming grant under these Regulations.

(f) Grant will be paid at the Day School rate for children who attend Boarding Schools as day scholars.

(g) No grants will be paid under these Regulations in respect of any attendance which is taken into account by the Board of Education in computing average attendance at a Public Elementary School for the purposes of Section 10 of the Education Act, 1902, or for any purpose of the Code of Regulations for Public Elementary Schools, or in respect of any School receiving any of the grants mentioned in that Code.

25—(a) The grant payable each year for a Certified School or Class for defective or epileptic children is as follows :—

(i) At the rate of 6*l.* for each unit of average attendance in a Certified Day School or Class.

(ii) At the rate of 12*l.* for each unit of average attendance in a Certified Boarding School.

(b) The average attendance for any period for which grant is payable is obtained by dividing the total number of attendances made in that period by the number of meetings of the School or Class during the period, a fraction of a unit being ignored or reckoned as an

additional unit according as it is, or is not, less than one-half.

(c) If the period for which grant is payable is longer or shorter than a school year, the average attendance on which the grant is calculated will be altered in proportion to the length of that period reckoned in months and days of a month.

(d) In calculating the average attendance, no attendances shall be included which are made by children while under five or over sixteen years of age.

(e) No grants will be paid under these Regulations in respect of children committed to a Certified School under the provisions of the Children Act, 1908, and for whom a Treasury contribution is claimable from the Home Office. Consequently the attendances of such children must be disregarded in calculating the average attendance for the purpose of claiming grant under these Regulations.

(f) No grants will be paid under these Regulations in respect of children for whom a maintenance grant is payable by the Local Government Board under a scheme for the institutional treatment of tuberculosis. Consequently the attendances of such children must be disregarded in calculating the average attendance for the purpose of claiming grant under these Regulations.

(g) Grant will be paid at the Day School rate for children who attend Boarding Schools as day scholars.

(h) No grants will be paid under these Regulations in respect of any attendance which is taken into account by the Board of Education in computing average attendance at a Public Elementary School for the purposes of Section 10 of the Education Act, 1902, or for any purpose of the Code of Regulations for Public Elementary Schools, or in respect of any School receiving any of the grants mentioned in that Code.

The above Minute, made under Section 12 of the Elementary Education (Blind and Deaf Children) Act, 1893, and Section 7 of the Elementary Education (Defective and Epileptic Children) Act, 1899, is given under the Seal of Office of the Board of Education on Friday, the 17th day of July, 1914, and presented to Parliament to lie on the Tables of both Houses for one month.

L. A. SELBY-BIGGE.

(L.S.)

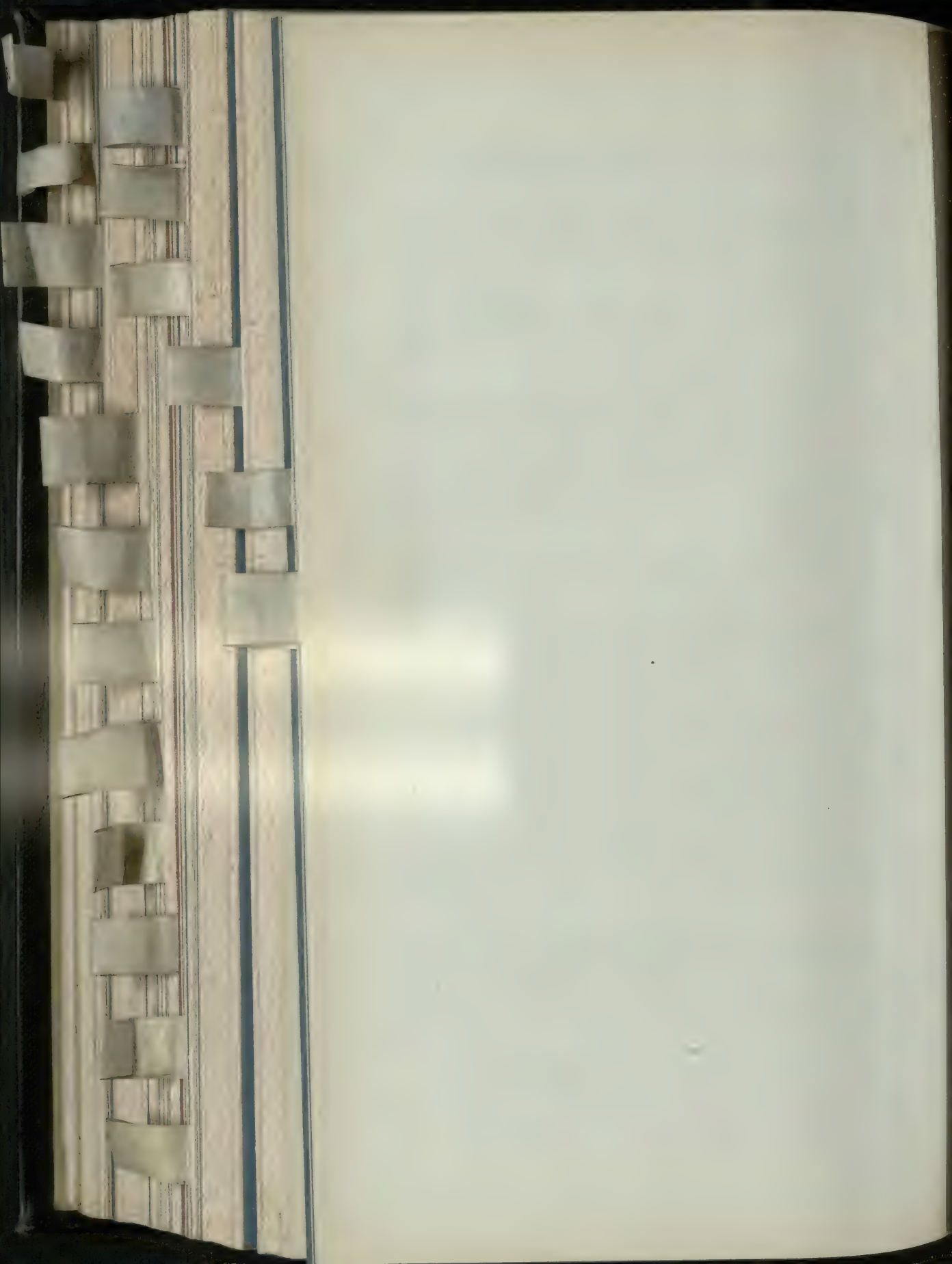
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BOARD OF EDUCATION.

REGULATIONS

APPLICABLE TO

SCHOOLS FOR BLIND, DEAF,
DEFECTIVE, AND EPILEPTIC CHILDREN.

(In force from 1st September, 1909.)

Presented to both Houses of Parliament by Command of His Majesty.



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- List of Public Elementary Schools and Certified Efficient Schools on 31st July, 1908. England [List 21]. Price 2s. 6d.; by post, 2s. 10d.: [List 21 (Wales)]. Price 2s. 6d.; by post, 5d.
- The Building Regulations. England [Cd. 3571]. Price 2d.; by post, 2½d.; Wales, Price, ditto.
- Regulations applicable to Schools for Blind, Deaf, Defective, and Epileptic Children. [Cd. 3636.] (With modifying minute of 30th June, 1908 [Cd. 4165]). 3d.; by post, 4d.
- List of Certified Schools for Blind, Deaf, Defective, and Epileptic Children in England and Wales on 31st July, 1908. [Cd. 4372.] Price 2d.; by post, 3d.
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- Annuity Tables. Price 1d.; by post, 1½d.
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- Special Report on the Teaching of Cookery to Public Elementary School Children. Price 2d.; by post, 3d.
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- Syllabus of Lessons on "Temperance" for Children attending Public Elementary Schools. [Cd. 4746.] Price 2d.; by post 2½d.
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- Circular on Medical Inspection, including functions of School Medical Officer, and Education Authority's Report etc. [Circular 596.] Price 1d.; by post, 1½d.

BOARD OF EDUCATION.

REGULATIONS

APPLICABLE TO

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REGULATIONS FOR SPECIAL SCHOOLS.

PREFATORY MEMORANDUM.

This present volume contains the Regulations under which grants are paid by the Board on account of the instruction of scholars attending special schools of all these various types, and to these are added the Building Rules for such schools and the Regulations as to boarding out blind and deaf children and defective children which have been made by the Board under the provisions of the Elementary Education (Blind and Deaf Children) Act, 1893, and the Elementary Education (Defective and Epileptic Children) Act, 1899, respectively.

The principal alterations which have been made in this year's issue of the Regulations relate to the conditions for the recognition of teachers in schools for blind and deaf children, contained in Articles 16 and 17. The Board think that it is important to secure that persons who are proposing, in future, to teach in these schools should be more systematically trained and tested with a view to their special work than has always been the case in the past. For this reason they introduced into the Regulations for the Training of Teachers for Elementary Schools in 1908, a new chapter providing for courses of training specially designed to prepare for work in special elementary schools of various types. The Board hope that an increasing number of teachers will, in the future, avail themselves of these provisions and undertake courses of training in accordance with the Regulations either for two years or three years. For the present, however, at any rate, the teachers who have been specially trained in this way are not likely to be sufficient in number to supply the needs of the schools, and such teachers will have to be supplemented by persons who are qualified as Certificated or Uncertificated Teachers in the ordinary way, and who later on wish to take up work in special elementary schools without having obtained any special training for this work. The new Regulations provide that Certificated and Uncertificated Teachers who have

not in the past been recognised in schools for blind or deaf children, will in future only be recognised provisionally as assistant teachers in such schools for a period of two years from the date of their appointment, and that their recognition either as head teachers or as permanent assistant teachers will be conditional on their passing an examination approved by the Board in the methods of teaching in schools for blind children or in schools for deaf children, as the case may be. Proposals have been submitted to the Board by the College of Teachers of the Blind and the Joint Examination Board for Teachers of the Deaf, with a view to the organisation of examinations which may be approved by the Board for this purpose, and these proposals are now receiving the consideration of the Board.

Persons who have been recognised under previous Regulations as teachers in schools for blind or deaf children may continue to be recognised as teachers in those schools without being required to pass any further examination. The Board will also, for the present, be prepared to recognise persons over the age of 18, possessing such other special qualifications as may be from time to time approved, as assistant teachers in schools for blind and deaf children. While the Board consider that a high standard of qualification is at least as necessary for teachers who are to be employed in such schools as for teachers who are to be employed in ordinary elementary schools, they recognise that at the present stage of progress a strict insistence on the possession of certain definite qualifications might hamper considerably the work of these schools, and they will be prepared for the present to consider on their merits applications for the recognition of persons who show evidence of special fitness for the work of these schools, though they do not possess qualifications that would entitle them to recognition as Certificated or Uncertificated Teachers under the Code.

Robert L. Morant

19th July, 1909.

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BOARD OF EDUCATION.

Regulations applicable to Special Schools for Blind, Deaf, Defective, and Epileptic Children.

CHAPTER I.

GENERAL REGULATIONS.

1.—(a) Schools may be certified by the Board of Education as Special Schools under the Elementary Education (Blind and Deaf Children) Act, 1893, or the Elementary Education

Articles 16 (c) and 17 (c) of these Regulations have been modified by the Minute of the Board of Education dated the 27th June, 1910 [Cd. 5232]. This Minute makes further provision as to the eligibility of certain existing teachers for recognition as Head Teachers of Schools for Blind or Deaf Children respectively, notwithstanding that they are not qualified under Articles 16 (a) and (b) or 17 (a) and (b) of these Regulations.

Articles 10, 19, 25 and 26 have been withdrawn and new Articles 10, 19 and 25 have been substituted by the Minute of the Board dated the 17th July, 1914. This Minute provides for the payment as from the 1st April, 1914 of increased grants for Schools for Blind, Deaf, Defective and Epileptic Children, and for the establishment of a uniform School Year for all special Schools commencing on the 1st April, 1915.

Copies of these Minutes can be obtained (price $\frac{1}{2}d.$ each, postage extra) from the Sale Agents shown on the cover of these Regulations.

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School.

(b) No child may be admitted to a Special School who has not completed five years of age, and no child may be retained in a Special School after completing 16 years of age, except with the special consent of the Board.

(c) In the case of each child, proper records must be made at the time of admission and periodically afterwards—

(i) as to the child's capacity, habits, attainments, and health;

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- (ii) as to the family history of the child ;
- (iii) as to the progress of the child.
- (d) The decision of the Board as to whether a child may or may not be retained in a Special School is final.

Instruction.

3.—(a) The education given in a Special School should, when possible, include the branches of instruction specified in these Regulations as suitable to the type of School in question.

(b) It is not necessary that all the subjects should be taught to every class or to all pupils, and the curriculum as a whole may be modified when the Inspector is satisfied that the needs of the scholars or the circumstances of the School require it.

(c) The Board of Education or the Inspector who visits the School may require any syllabus to be submitted for approval. The Board may require the modification of any syllabus which is unsuitable.

(d) The Inspector may, where necessary, require brief notes to be produced or such other evidence as will show that the lessons have been duly prepared.

(e) The Time-Table and the arrangements of the curriculum of secular instruction are subject to the approval of the Board, which will be expressed by the Inspector on behalf of the Board. Modifications of the arrangements so approved must not be made without previous sanction.

Teachers.

4.—(a) Each member of the teaching staff must be approved by the Board (*see* Articles 16, 17 and 22).

(b) Such approval will be subject to reconsideration after each visit of inspection.

(c) The withdrawal of the approval of any teacher as a teacher in a Special School will not of itself affect that teacher's qualification as a teacher in an ordinary public elementary school.

(d) Notice should at once be given to the Board of any change in the staff. Forms on which this notice should be given may be obtained on application.

5.—The employment of teachers in Special Schools is subject to the following conditions:—

- (a) All teachers must be employed under written agreements except that, in the case of a school provided by a Local Education Authority, teachers may be employed under minutes of the Authority.

- (b) Any such agreement or minute of appointment, dated on or after 1st September, 1907, must include, either expressly or by reference, the following clause:—

“The teacher shall not be required to perform any duties except such as are connected with the work of the school or institution, or to abstain outside the hours of official duty from any occupations which do not interfere with the due performance of his duties as a teacher of the school or institution.”

Premises.

6.—(a) The premises must be approved by the Board.

(b) Approval in the case of new premises will only be accorded if the Rules given in Appendix II. of these Regulations are complied with.

(c) Boys and girls attending a Boarding School or Home must be separated as a rule for all purposes other than meals, lessons, and recreation under supervision.

(d) The average number of scholars in attendance must not exceed the recognised accommodation, and no room may be habitually used for a larger number than that for which it is accepted by the Board.

Inspection.

7.—(a) The School must at all times be open to the Officers of the Board of Education and to the inspection of any visitors authorised by a Local Education Authority sending children to the School.

(b) A School will not necessarily receive a formal visit of inspection or be made the subject of a detailed report each year, but every School will be so visited and reported upon from time to time.

(c) Any report of an Inspector, and any remarks made thereon by the Board for communication to the Local Education Authority, or to the Managers of the School, must as soon as received, be entered in full in the Log Book, and signed by the Correspondent.

8.—(a) The School must meet not less than 400 times in the school year.

(i) If the grant for a School is payable for a period other than 12 months the number of meetings required under this regulation will be altered in proportion to the length of the period.

(ii) If the scholars have been excluded from instruction owing to a closure of the School under medical

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authority or for any other unavoidable cause, the grant may be paid in full, provided the requirements of this Article are satisfied after an allowance of nine meetings has been made for each week of such closure.

(b) The duration of a meeting must not as a rule exceed two and a half hours.

(c) Not more than two meetings may be held in any one day, and an interval of at least an hour and a half must as a rule be interposed between the morning and afternoon meeting of the School.

(d) No attendance for the purpose of grant may be registered at any meeting for any child who has not been present at secular instruction for at least one hour and a half, excluding any times given to recreation or registration.

Grants.

9.—(a) Before a grant for any period is payable in respect of a Special School, the Board must be satisfied by certificates in the prescribed form, signed on behalf of the Managers, that during such period—

(i) the admission and daily attendance of the scholars have been duly recorded by, or under the supervision of, the Head Teacher, and duly verified by the Managers, and that—

(ii) the School has been duly conducted in accordance with the provisions of the Elementary Education (Blind and Deaf Children) Act, 1893, or the Elementary Education (Defective and Epileptic Children) Act, 1899, as the case may be, and with these Regulations.

(b) Before a grant for any period is payable in respect of a Special School, the Board must have received a certificate from an Inspector stating that to the best of his information and belief the School has been conducted in accordance with the Elementary Education (Blind and Deaf Children) Act, 1893, or the Elementary Education (Defective and Epileptic Children) Act, 1899, as the case may be, and with these Regulations.

10.—(a) The grant payable each year in respect of a Special School is that laid down in Articles 19, 25 and 26.

(b) The grant becomes due on the day following the close of the school year.

(c) The grants payable under these Regulations are in lieu of Fee Grant, and of any Grants that might be payable under the Code of Regulations for Public Elementary Schools.

(d) In the case of a breach of the conditions of these Regulations, the Board may, when there are special circumstances which would justify it, pay the full grant or a portion of it, notwithstanding anything in these Regulations to the contrary.

Miscellaneous Regulations and Conditions.

11.—The provisions regulating religious instruction in Special Schools are those enacted by Section 8 of the Elementary Education (Blind and Deaf Children) Act, 1893.

12.—Every School must have specially appointed Managers, who will undertake to visit the School from time to time during school hours.

13.—The School must not be conducted for private profit or farmed out to the teacher, and if it is not managed by a Local Education Authority the accounts must be audited by a qualified Public Accountant and Auditor, and published in the form prescribed by the Board.

14.—(a) Such rules as to school records and the registration of attendance as may be prescribed by the Code of Regulations for Public Elementary Schools, in force for the time being, must, so far as applicable, be observed in Special Schools.

(b) All returns called for by the Board or by Parliament, must be duly made, and the registers and other school documents, or any of them, if required by the Board or by the Inspector who visits the School, must be submitted for inspection forthwith.

(c) In the case of any School approved for the purpose by the Board, students from a Training College must, on request from the authorities of the College or from the Board, be allowed to attend the School for the purpose of receiving practical instruction in teaching, or for observation, on such conditions as may be approved by the Board.

(d) Notice must be sent to the Inspector as soon as is possible in each case, of every date upon which the School will be closed or its ordinary work suspended, whether for the holidays or for any special occasion, and in the event of failure to give timely notice, a deduction may be made from the Grant unless the managers or the local authority acted without timely notice by reason of a sudden emergency. Unless it is possible to give at least seven days' clear notice of an intended closure, such notice should be given by telegram.

(e) If the sanitary authority of the district in which the School is situated, or any two members thereof, acting on the advice of the Medical Officer of Health, require either the closure of the School or the exclusion of certain children for a specified time, with a view to preventing the spread of disease

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or any danger to health likely to arise from the condition of the School, the requirement must at once be complied with, but after compliance appeal may be made to the Board if the requirement is considered unreasonable.

CHAPTER II.

SPECIAL REGULATIONS APPLICABLE TO SCHOOLS FOR BLIND AND DEAF CHILDREN.

Curriculum.

15.—(a) The curriculum in a Special School for Blind Children should include the following subjects:—

The English Language, including speaking with clear articulation and enunciation, reading, literature, writing, composition, and recitation.

Arithmetic, including mental arithmetic and practical knowledge of Money, Weights, and Measures.

Knowledge of Common Things, including Nature Study and Observation Lessons.

History.

Geography.

Singing and Music, including training in proper breathing.

Physical Exercises.

Plain Needlework (for Girls).

Manual Instruction (*see* Appendix I.).

(b) The curriculum of a Special School for Deaf Children should include the following subjects:—

The English Language, to be taught by the oral method where possible, and to include reading, writing, composition, and the study of literary matter.

Arithmetic, including practical knowledge of Money, Weights, and Measures.

Knowledge of Common Things, including Nature Study and Observation Lessons.

History.

Geography.

Drawing.

Physical Exercises, including training in proper breathing.

Plain Needlework (for Girls).

Manual Instruction (*see* Appendix I.).

(c) Not less than four hours of Manual Instruction must be given weekly to each child in a Special School for Blind or Deaf Children.

(d) Suitable forms of Manual Instruction are given in Appendix I. Other forms may be submitted to the Board for approval. They should be chosen both with a view to developing the child's intelligence and also with a view to enabling the child to earn a living.

Teachers.

16.—(a) Subject to the exceptions provided for in paragraphs (b) and (c) below, the Head Teacher of a Special School for Blind Children must either—

- (i) have completed satisfactorily a course of training specially designed to prepare for work in Schools for Blind Children under Chapter VII. of the Regulations of the Board for the Training of Teachers for Elementary Schools; or
- (ii) have passed the Certificate Examination of the Board for Blind Teachers in Elementary Schools; or
- (iii) be recognised as a Certificated Teacher under Schedule I.A. of the Code, and have passed, in addition, an examination approved by the Board in the methods of teaching in Schools for Blind Children.

(b) Any person recognised by the Board as a Certificated Teacher before 1st August, 1910, may be accepted by the Board as the Head Teacher of a School for Blind Children, provided that the Board are satisfied that he has had adequate experience in a School for Blind Children.

(c) A Teacher who has been recognised under previous Regulations as the Head Teacher of a School for Blind Children may continue to be recognised as the Head Teacher of that School.

(d) Subject to the exceptions provided for in paragraphs (e) and (f) below, an Assistant Teacher in Schools for Blind Children must either—

- (i) be qualified for recognition as a Head Teacher in accordance with Article 16 (a) above; or
- (ii) be recognised as an Uncertificated Teacher under Schedule I.C. of the Code, and have passed, in addition, an examination approved by the Board in the methods of teaching in Schools for Blind Children.

(e) Certificated and Uncertificated Teachers may be recognised provisionally as Assistant Teachers in Schools for Blind Children for a period of two years from the date of their appointment, pending their passing an examination approved by the Board in the methods of teaching in Schools for Blind Children.

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(f) Teachers who have been recognised as Assistant Teachers in Schools for Blind Children under previous Regulations, may continue to be so recognised, and persons over the age of 18, possessing such other special qualifications as the Board may from time to time approve, may, for the present, be recognised as Assistant Teachers in Schools for Blind Children. Pupil-Teachers and Monitors will not be recognised in Schools for Blind Children.

17.—(a) Subject to the exceptions provided for in paragraphs (b) and (c) below, the Head Teacher of a Special School for Deaf Children must either—

- (i) have completed satisfactorily a course of training specially designed to prepare for work in Schools for Deaf Children under Chapter VII. of the Regulations of the Board for the Training of Teachers for Elementary Schools; or
- (ii) be recognised as a Certificated Teacher under Schedule I.A. of the Code, and have passed, in addition, an examination accepted by the Board in the methods of teaching in Schools for Deaf Children.

(b) Any person recognised by the Board as a Certificated Teacher before 1st August, 1910, may be accepted by the Board as the Head Teacher of a School for Deaf Children, provided that the Board are satisfied that he has had adequate experience in a School for Deaf Children.

(c) A Teacher who has been recognised under previous Regulations as the Head Teacher of a School for Deaf Children may continue to be recognised as the Head Teacher of that School.

(d) Subject to the exceptions provided for in paragraphs (e) and (f) below, an Assistant Teacher in Schools for Deaf Children must either—

- (i) be qualified for recognition as a Head Teacher in accordance with Article 17 (a) above; or
- (ii) be recognised as an Uncertificated Teacher under Schedule I.C. of the Code, and have passed, in addition, an examination approved by the Board in the methods of teaching in Schools for Deaf Children.

(e) Certificated and Uncertificated Teachers may be recognised provisionally as Assistant Teachers in Schools for Deaf Children for a period of two years from the date of their appointment, pending their passing an examination approved by the Board in the methods of teaching in Schools for Deaf Children.

(f) Teachers who have been recognised as Assistant Teachers in Schools for Deaf Children under previous Regulations, may

continue to be so recognised, and persons over the age of 18, possessing such other special qualifications as the Board may from time to time approve, may, for the present, be recognised as Assistant Teachers in Schools for Deaf Children. Pupil-Teachers and Monitors will not be recognised in Schools for Deaf Children.

18.—(a) Each class in a Special School for Blind or Deaf Children must have a teacher of its own. Blind Children must be taught separately from Deaf Children, though one Head Teacher may have charge of separate adjoining departments.

(b) The number of children in average attendance should not exceed 15 in a class for Blind Children and 10 in a class for Deaf Children.

19.—For each Blind or Deaf Child who has attended a certified school for not less than one month during the school year, grants may be allowed for each complete month of attendance:

(a) At the rate of 3*l.* 3*s.* a year if such child has received with due regularity efficient elementary education other than manual instruction or industrial training, and his attainments are found to be satisfactory, regard being had to his necessary disqualifications.

(b) At the rate of 2*l.* 2*s.* a year if such child has received with due regularity satisfactory instruction and made satisfactory progress in some course of manual instruction or industrial training approved by the Board.

CHAPTER III.

SPECIAL REGULATIONS APPLICABLE TO SCHOOLS FOR DEFECTIVE OR EPILEPTIC CHILDREN.

Curriculum.

20.—(a) The curriculum in a Special School for Mentally Defective Children should include the following subjects:—

The English Language, including speaking with clear articulation and enunciation, reading, writing, and recitation.

Arithmetic, including mental arithmetic and practical knowledge of Money, Weights and Measures.

Knowledge of Common Things, including Nature Study and Observation Lessons.

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Drawing.

Singing, including training in proper breathing.

Physical Exercises.

Plain Needlework (for Girls).

Manual Instruction (*see* Appendix I.).

(b) The curriculum in Special Schools for Epileptic and Physically Defective Children should include, in addition to the subjects specified above, Composition, Study of Literary Matter, History and Geography. The instruction should generally resemble that given in ordinary Public Elementary Schools (Articles 1 and 2 of the Code).

21.—(a) Not less than six hours of Manual Instruction must be given weekly to each child in a Special School for Defective or Epileptic Children, and the conditions set out below must be observed.

(b) The forms of Manual Instruction suitable for Defective and Epileptic Children are given in Appendix I. Other forms of Manual Instruction may be submitted to the Board for approval.

(c) The forms of Manual Instruction suitable for Epileptic Children may be more advanced than those named in Appendix I., and must be submitted to the Board for approval. They must be chosen with a view (1) of training manual and mental powers, and (2) of fitting the child to earn a living. Care must be taken to avoid the use of dangerous tools.

(d) Where the premises of a Special School do not include a classroom for Manual Instruction, such instruction may be given elsewhere under arrangements approved by the Board. It is undesirable as a rule that mentally defective children should receive Manual Instruction in company with children attending Public Elementary Schools.

Teachers.

22.—(a) No person under the age of 20 years may be approved as a teacher of Defective or Epileptic Children without express sanction of the Board.

(b) Subject to the continued recognition, if satisfactory, of teachers at present employed and to the recognition of teachers possessing such other qualifications as the Board of Education may from time to time approve, teachers in Special Schools for Defective or Epileptic Children must be qualified as follows:—

(i) The Head Teacher must either—

(a) be Certificated under Schedule I. of the Code; or

(b) must hold the Higher Certificate of the National Froebel Union;

(c) provided that if there be less than 10 children on the roll, the Head Teacher may be an Uncertificated Teacher;

(d) but no teacher will, as a rule, be recognised as a Head Teacher, unless he or she has had some experience in a Certified School for Defective or Epileptic Children.

(ii) Assistant Teachers must be either Certificated Teachers or Uncertificated Teachers (Schedule I. of the Code), or must hold the Higher or the Elementary Certificate of the National Froebel Union.

(iii) Pupil-Teachers and Monitors are not recognised as part of the staff of a School for Defective or Epileptic Children.

23.—(a) Each Class in a Special School for Defective or Epileptic Children must have a teacher of its own. Mentally Defective children must be taught in separate Schools or Departments from Physically Defective children, though one Head Teacher may, with the consent of the Board, be placed in charge of separate adjoining departments.

(b) The number of children in average attendance should not exceed twenty for each class, except that, if the number of classes in the School exceeds two, there may be an average attendance of 25 in each class other than the two lowest.

24.—Provision must be made for the examination from time to time of every child in a Defective or Epileptic School at least once a year, by a suitably qualified medical man in order to ascertain whether (a) he has attained such a mental and physical condition as to be fit to attend an ordinary class in a public Elementary School, or (b) he is so defective as to be incapable of profiting by education of any kind.

25.—The grant payable each year in respect of a certified boarding school for defective or epileptic children is as follows:—

For each defective or epileptic child who has attended the School for not less than one month during the school year and has received with due regularity efficient elementary education, including manual instruction or industrial training, a grant of 7s. may be allowed for each month of that part of the school year during which the name of the child has been on the books. The Board have power to pay a proportionate grant for part of a month, or to make deductions in respect of absences from instruction.

26.—(a) The Grant payable each year in respect of a certified day school or class for defective children is as follows:—

On account of instruction other than Manual Instruction—
50s. for each unit of average attendance.

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On account of Manual Instruction—

30s. for each unit of the average attendance of younger children, and 40s. for each unit of the average attendance of older children.

(i) For each completed tenth of a unit of average attendance, one-tenth of the above Grants is payable.

(ii) If the period for which the Grant is payable is other than a year the above rates of Grant are proportionately altered.

(b) The average attendance for any period for which a Grant is payable is obtained by dividing the total number of attendances made in that period by the number of meetings of the School during that period, and will be calculated to completed tenths of a unit.

The above Regulations, together with the Rules of the Appendices, which have equal authority with the Regulations, are given under the Seal of the Board of Education on Monday, the 19th day of July, 1909, and presented to Parliament, pursuant to the 97th Section of the Elementary Education Act, 1870, to lie on the Tables of both Houses for one month. They will come into operation on the 1st September, 1909. The Regulations of the Board of Education, dated 22nd July, 1907, are hereby continued in operation until 31st August, 1909.

ROBERT L. MORANT.

APPENDIX I.

Suitable forms of Manual Instruction.**FOR DEFECTIVE AND EPILEPTIC CHILDREN.****FOR BLIND CHILDREN.****(a.) Younger Children—**

Bead threading
 Drawing
 Paper folding
 Paper tearing
 Paper cutting and mounting
 Paper mat making
 Clay modelling
 Plasticine modelling
 Macramé work
 Netting and other string work
 Kindergarten sewing
 Wood strip work
 Pith cane work.

(b.) Older Boys—

Drawing and design
 Woodwork and carpentry
 Tailoring
 Shoe making and repairing
 Cardboard modelling
 Chair caning
 Gardening and farm work
 Household employments
 Mat and rug making
 Repoussé
 Bent-iron work
 Printing
 Baking
 Basket work.

(c.) Older Girls—

Cookery
 Laundry work
 Housewifery
 Needlework, plain and fancy
 Knitting
 Mending
 Machine sewing
 Drawing and design
 Basket work
 Chair caning
 Gardening.

(a.) Younger Children—

Mat plaiting
 Clay modelling
 Bead threading
 Bead design work
 Lacing
 Knotting, netting and string work
 Rug and mat making
 Pith cane work
 Strawplaiting.

(b.) Older Boys—

Clay modelling
 Basket work
 Chair caning
 Brush making
 Coir mat making
 Woodwork
 Bent-iron work.

(c.) Older Girls—

Sloyd needlework
 Needlework
 Knitting
 Mending
 Chair caning
 Basket work
 Brush making.

Forms of manual instruction suitable for defective and epileptic children are also suitable for deaf children, with the addition of dress-making and corset making, lace making and baking.

Other forms of manual instruction may be suggested for approval.

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APPENDIX II.

Building Rules for Schools for Blind, Deaf, Defective, and Epileptic Children.

N.B.—These Rules must be read in conjunction with the Building Regulations for Public Elementary Schools.

GENERAL RULES.

1.—(a) Schools for various types of afflicted children should not be held in the same building unless structurally separated for each type.

(b) All rooms for physically defective children must be on the ground floor.

(c) In institutions and colonies for boarding and lodging afflicted adults as well as children, the whole of the school premises should be structurally separated from the adult accommodation.

Playgrounds.

2. Where no field or other larger space has been secured, the superficial area of the site should provide not less than 30 square feet per child of open space exclusive of buildings. The playgrounds for boys and girls should be separate, except in schools for physically defectives where the offices are inside the school. There should be a large covered shed open on one side, provided with ample top light, which, under supervision, may be used by boys and girls together.

Class Rooms.

3.—(a) Not less than 15 square feet of floor space per child in average attendance must be provided except in the case of schools for physically defective children, when 18 square feet per child will be required.

(b) No class room should contain less than 200, or in the case of schools for physically defective children, 260 square feet of floor space.

(c) The light should be ample and such as to suit the mode of teaching employed. In schools for blind and deaf children the scholars should, as a rule, be arranged in a semi-circle round the teacher, and the light should be arranged so as to enable the teacher to see, in the case of the blind, every change of facial expression, and so that in the case of the deaf, the teacher and scholars may observe closely the action of the lips.

(d) In day schools there should be a wide and well-lighted corridor or hall, and a room for the use of the teachers. Accommodation should be arranged for medical inspection.

(e) Each child must, as a rule, be provided with a single desk of suitable size and, except in blind schools, sloped at an angle of from 10 to 15 degrees.

(f) Suitable rooms or accommodation must be provided for manual instruction. Such rooms, if suitably arranged, may be reckoned in the accommodation.

4. All playgrounds, offices, cloakrooms, lavatories, entrances, and passages must be so constructed as to admit of easy supervision by the teachers of the school, and must, as a rule, be kept for the sole use of the children attending that school. Except in schools for physically defective children separate entrances, playgrounds, and offices should be provided for boys and girls.

RULES APPLICABLE TO BOARDING SCHOOLS AND HOMES.

Dormitories.

5.—(a) The minimum width should be 16 feet, the minimum area should be 50 square feet per child, and the minimum cubic capacity 500 cubic feet per child. A separate bed must be provided for each child, with sufficient space between the beds. Cross ventilation must be provided where possible.

(b) Adequate means of supervision must be provided in a dormitory; this may be secured by means of a window in the bedroom of the officer in charge. In houses, or homes, having small bedrooms, the officer's bedroom should be closely adjoining on the same floor.

(c) No boys over nine years of age should be lodged with girls, unless in a distinct wing approached by a separate staircase. Boys under nine years of age may be housed in the same buildings with girls, but must have separate dormitories. Each supervising officer should have a separate bedroom.

(d) Adequate provision should be made for storing clothing and household materials, and each child should have a locker or box wherein to keep his own property.

Dining Rooms.

6.—(a) These should be of sufficient size to seat each child comfortably, with space for the passage of waiters. The minimum area is 10 square feet per child.

(b) A room for joint use as a playroom and dining room should have an area of not less than 25 square feet per child, and provision should be made to separate at mealtimes the part used for a dining room.

Play Rooms.

7. These should be of at least the same size as the school rooms.

Sick Rooms.

8.—(a) These should be separate for boys and girls and should consist of two rooms at least in each case, viz., one for the patients and the other for the nurse. An aspect S.E., S., or S.W. is to be preferred. A closet and bath room should be provided in close connection with the sick room. These rooms should be so arranged that they can be isolated from the rest of the building in order to meet cases of suspected infectious disease pending its determination and removal to hospital or sanatorium.

(b) A detached building is also necessary for infectious cases, except in the neighbourhood of a hospital to which cases can be readily conveyed.

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Baths and Lavatories.

9. These should be supplied with hot and cold water, and should be of sufficient number to enable each child to obtain a bath at least once a week in winter and twice in summer. Lavatory basins should be sufficient to enable each child to wash the hands, face, and upper portion of the body morning and evening. The water supply should be sufficient to admit of fresh water for each child. There should be provision in the bath rooms and lavatories for a separate towel for each child.

Latrines.

10. For day.—The provision of closets should be 10 per cent. on the number of boys, together with a urinal; and 15 per cent. on the number of girls, with facility for frequent supervision.

For night.—One or two closets should be provided adjoining the dormitories, but disconnected therefrom by a lobby having a current of air by windows on two sides.

Staircases and Corridors.

11. These must be fireproof. Alternative exits from all rooms not situated on a ground floor must be provided for use in case of fire.

BOARD OF EDUCATION.

REGULATIONS AS TO BOARDING-OUT BLIND AND DEAF CHILDREN.

(Elementary Education (Blind and Deaf Children) Act, 1893,
sec. 2 (1).)

The Board of Education by virtue and in pursuance of the powers in them vested under the Elementary Education (Blind and Deaf Children) Act, 1893, and of every other power enabling them in this behalf, do order, and it is hereby ordered, that the following regulations be observed:—

1. A Local Education Authority may, subject to the provisions of these regulations, board-out blind or deaf children resident in their district in homes conveniently near to a school for the time being certified by the Board of Education as suitable for providing elementary education for such children respectively, under arrangements approved by the Board of Education with a Boarding-out Committee, constituted as hereinafter mentioned.

2. A Boarding-out Committee shall consist of three or more persons, to be approved by the Board of Education, who shall have signed an engagement in the form annexed to this Order (Schedule I.).

3. Any person deriving any pecuniary or other personal profit from the boarding-out of any child shall be thereby disqualified from becoming or continuing to be a member of any such Boarding-out Committee.

4. The Boarding-out Committee shall from time to time appoint one of their members to act as Secretary; and it shall be the duty of the Secretary punctually to inform the Board of Education of any vacancies which may be caused by death, resignation, or otherwise, amongst the members of the Committee, and to submit the names of the persons proposed to fill the vacancies.

5. A child may be withdrawn from a home by its parent or by the Local Education Authority of the district from which the child is sent, notice of the intention to do so being given at least one week beforehand to the Boarding-out Committee; and the foster-parent shall, upon the demand of a person duly authorised in writing by the Boarding-out Committee, or by the Local Education Authority, or by the parent, deliver up the child to such person.

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6. The Regulations to be observed by the Local Education Authority with respect to such boarding-out of blind or deaf children shall be as follows:—

- (1.) There shall not be more than two blind or two deaf children boarded-out in the same home at the same time.
- (2.) No blind child shall be boarded-out in a home where there is a deaf child, nor a deaf child where there is a blind child.
- (3.) No child shall be boarded-out in a home in which, at the time when the child would first be placed in it, there would be with such child more than four children resident, or in which any pauper child is boarded-out by the Guardians.
- (4.) No child shall be boarded-out with any person who is at the time, or who has been within 12 months preceding, in receipt of relief; and if the foster-parent shall at any time become in receipt of relief, any child boarded-out with him shall be withdrawn from him.
- (5.) The Local Education Authority shall, if possible arrange for the boarding out being with a person belonging to the religious persuasion of the child's parent. (Section 8 (3) of the Act.)
- (6.) No child shall be boarded-out without a certificate, in the Form annexed to this Order (Schedule II.), signed by a duly qualified medical practitioner, stating the particulars of the child's health, such certificate to be forwarded by the Local Education Authority to the Boarding-out Committee.
- (7.) Before receiving any child to be boarded-out with him, the foster-parent shall sign an undertaking in duplicate, which shall, in addition to any other matter which may be agreed upon, contain an engagement on the part of the foster-parent, that in consideration of a certain sum per week, he will bring up the child as one of his own children, and provide the child with proper food, lodging, and washing, and endeavour to train the child in habits of truthfulness, obedience, personal cleanliness, and industry, as well as in such special industry or occupations as may be prescribed by the managers of the certified school which the child attends; that he will take care that the child shall attend duly at church or chapel according to the religious denomination to which the child belongs, and shall attend the particular certified school directed by the Local Education Authority according to the provisions of the law for the time being, and will make such provision as may be necessary for the escort of the child to and from church or chapel and school; that he will provide for the proper repair and renewal of the child's clothing, and that, in case of the child's illness, he will forthwith report such

illness to the Local Education Authority, to the child's parent, and to the Boarding-out Committee; and that he will at all reasonable times permit the child to be visited by his parent, and will at all times permit the child to be visited, and the house to be inspected by any member of the Boarding-out Committee, and by any person specially appointed for that purpose by the Local Education Authority or by the Board of Education. The undertaking shall also contain an engagement on the part of the foster-parent that he will, upon the demand of the child's parent or of a person duly authorised in writing by him or by the Boarding-out Committee, or by the Local Education Authority, give up possession of the child.

Such undertaking shall be made in triplicate, according to the Form annexed to this Order (Schedule III.). One copy of it shall be kept by the foster-parent, another by the Local Education Authority, and another by the child's parent.

- (8) On the delivery of the child to the foster-parent an acknowledgment shall be given in the Form herein-after prescribed (Schedule IV.), or to the like effect.
- (9.) In no case shall the sum to be paid to the foster-parent for the maintenance of a child, inclusive of lodging, but exclusive of clothing, school-fees, fees for medical attendance, medicines, and extras ordered by a medical attendant, be less than six or more than ten shillings per week.
- (10.) Unless arrangements can be made for transit by some public conveyance, no child shall be boarded-out in a home distant more than one mile from the certified school which the child attends.
- (11.) The managers of the certified school shall undertake to receive the child and to send to the Local Education Authority at least once a quarter a written report upon the child, in the Form annexed to this Order (Schedule V.).
- (12.) No child shall be boarded out in any home which is distant more than five miles by the nearest road of access from the residence of some member of the Boarding-out Committee.

7. Every boarded-out child shall be visited not less often than once in every month by a member or officer of the Boarding-out Committee at the home of the foster-parent, and the visitor shall thereupon make a report in writing to the Committee, mentioning the apparent bodily condition and the behaviour of such child, and the state of the home, and all reasonable complaints made by the child or the foster-parent.

These reports shall be forwarded by the Boarding-out Committee to the Local Education Authority and to the child's parent not less often than quarterly.

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If in the case of any boarded-out child no such report shall be received by the Local Education Authority or the parent for the space of four consecutive months, the Local Education Authority shall in default of satisfactory explanation withdraw the child from the home with all reasonable expedition.

8.—(1.) The Local Education Authority shall, as soon as practicable after the first day of April and the first day of October in every year, make a return to the Board of Education, in the Form annexed to this Order (Schedule VI.), of the several children remaining so boarded-out on those dates respectively. Separate returns shall be made for blind and deaf children respectively.

(2.) The Secretary to the Boarding-out Committee shall make a return to the Board of Education as soon as practicable after the first day of January and the first day of July in every year of the several children remaining boarded-out under the supervision of the Committee on those days respectively under these Regulations. Such return shall be made according to the prescribed Form, Schedule VII. of this Order, and shall be made separately for blind and deaf children respectively.

9. If the Board of Education shall withdraw from any Boarding-out Committee the authority to enter into arrangement with Local Education Authorities, the Local Education Authorities who have made arrangements with the said Committee for the boarding-out of children shall, on receiving notice of such withdrawal, provide with all reasonable expedition for the return of all children boarded-out in homes found by such Committee to their own homes or for their transfer to homes found by another Boarding-out Committee. Provided that it shall not be necessary for the Local Education Authority to take back such children if the Board of Education declare that the withdrawal of authority from the Committee shall not apply to children already boarded-out under their superintendence.

10. Where the arrangements made by a Local Education Authority with any Boarding-out Committee under these Regulations include the payment of any sums by such Committee on behalf of the Local Education Authority, the Local Education Authority may, if they think fit, advance to the Boarding-out Committee quarterly a sum not exceeding three-fourths of the expenditure which, in pursuance of such arrangements, may reasonably be expected to be incurred by such Committee during the ensuing quarter.

11. In this Order—

The term "foster-parent" means the persons or person with whom any child is boarded-out under the provisions of this Order.

Other expressions have, unless the contrary intention appears, the same meaning as in the Elementary Education (Blind and Deaf Children) Act, 1893.

All words importing the masculine gender shall be deemed and taken to include females, and the singular to include the plural, and the plural the singular, unless the contrary as to gender or number is expressly provided.

ROBERT L. MORANT,

Secretary.

19th July, 1909.

SCHEDULE I.

Engagement to observe Regulations.

[We, the undersigned, being desirous of being constituted a Boarding-out Committee*] for the purpose of finding and superintending homes for blind and deaf,† do hereby, in the event of our obtaining the requisite authority of the Board of Education to act as a Boarding-out Committee, engage truly and faithfully to observe the regulations of the Board of Education dated the 22nd day of July, 1907, or which may from time to time be prescribed by the Board of Education with respect to the boarding-out of Blind or Deaf children.

And We [or I] do also hereby undertake to furnish to the Board of Education, or to any of His Majesty's Inspectors of Schools all such reasonable information respecting children who may be boarded-out under the superintendence of the Committee as the said Board or Inspectors may from time to time require.

We desire to be known as the [] Committee.

Boarding-out

* In the case of a proposed addition to the Committee, substitute for the words in [] the following:— "I, the undersigned, being desirous of becoming a member of the Boarding-out Committee formed," and also omit the words in italics.

† If the Committee is concerned with blind children only strike out "and deaf"; if with deaf children only, strike out "blind and."
‡ Insert name of place or district.

Signatures in full.

Addresses.

Dated this day of , 19 . . .

SCHEDULE II.

Medical Certificate.

Local Education Authority.

I, the undersigned, having this day personally examined C.D., years, residing at , hereby certify that he is not suffering from any contagious or infectious disease, and that his bodily health is good [with the exception that*].

(Signed) _____

Medical Qualifications _____

Address _____

Dated this day of , 19 . . .

* Here state the particulars of any exceptions.

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SCHEDULE III.

Undertaking of Foster-Parent.

BOARDING-OUT OF DEAF OR BLIND CHILD.

_____ Local Education Authority.

_____ Boarding-out Committee.

_____ Name of child's parent.

_____ Name of child.

_____ Whether blind or deaf.

_____ Religious denomination of child's parent.

_____ Name of foster-parent.

_____ Certified School which the child is to attend.

I, A.B., of _____, do hereby engage with the above-named Local Education Authority, in consideration of my receiving the sum of _____ per week, to bring up C.D., aged _____ years on the _____ day of _____ last, as one of my own children, and provide him with proper food, lodging, and washing, and to endeavor to train him in habits of truthfulness, obedience, personal cleanliness, and industry, as well as in such special industry or occupation as may be prescribed by the managers of the above-named certified school to take care that the child shall attend duly at church [or chapel] and shall attend the above-named certified school according to the provisions of the law for the time being, and will make such provision as may be necessary for the escort of the child to and from church [or chapel] and school; that I will provide for the proper repair and renewal of the child's clothing, and that, in case of the child's illness I will forthwith report such illness to the Local Education Authority, the child's parent, and to the above-named Boarding-out Committee, and that I will at all reasonable times permit the child to be visited by his parent, and will at all times permit the child to be visited and his house to be inspected by any member of the Boarding-out Committee and by any person specially appointed for that purpose by the Local Education Authority or by the Board of Education. I do also hereby engage, upon the demand of the child's parent, or of a person duly authorised in writing by him or by the Boarding-out Committee, by the Local Education Authority, to give up possession of the child.

* Insert
"church,"
"chapel," or
according to the
religious denomi-
nation to which
the child's parent
belongs.

† Any other
matter which
may be agreed
upon may here
be added.

†
Dated this _____ day of _____, 19 ____.

Signature (in full)
Foster-Parent.

Address of Foster-
Parent.

Witness to the Signature of
the Foster-Parent.

Address of Witness.

- N.B.—1. Communications to the Local Education Authority to be addressed _____
2. Communications to the Boarding-out Committee to be addressed _____
3. Communications to the child's parent to be addressed _____

SCHEDULE IV.

Acknowledgment of Foster-Parent.

_____ Local Education Authority.

I, *A.B.*, of _____, hereby acknowledge that I have
 this day received *C.D.*, aged _____ years, from the above-named Local
 Education Authority, on the terms and conditions contained in the
 annexed undertaking; and that I have also received for the use of the
 said *C.D.* the articles of clothing set out in the list appended hereto.

Dated this _____ day of _____ . 19 ____ .

(Signed) _____

Address _____

(Witness) _____

Address of }
 Witness } _____

List of Clothing.

(Here set out the articles in detail.)

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SCHEDULE V.

School Manager's Report on Child.

CERTIFIED SCHOOL.

Report for the quarter ending _____

Name of Child.	Age.	Whether Blind or Deaf.	Name and Address of Foster-Parent.	Days absent from School during the Quarter.	Alleged causes of Absence.	Observations as to Appearance, Conduct, and Progress of Child.	Books and Stationery and other Apparatus supplied during the Quarter.	School Fees and cost of Books and Stationery and Apparatus.
								£ s. d.

(Signature) _____

(Address) _____

Date _____

N.B.—This report may be arranged in any other manner which may be deemed more convenient, provided that all the particulars above mentioned be included in it.

SCHEDULE VI.

Local Education Authority's Return to the Board of Education.

LOCAL EDUCATION AUTHORITY.

Return of the* *Children boarded-out in Homes on the 1st day of April [or October], 19*

1. Name of Child.	2. Age.	3. Name of Foster-Parent.	4. Address of Foster-Parent.	5. Boarding-out Committee under whose Superintendence the Child is Boarded-out.	6. Date of first Boarding-out.	7. Date of Boarding-out with Present Foster-Parent, if there has been a change.	8. Name of Certified School attended.

Clerk to the Local Education Authority.

Date.

* State whether blind or deaf.

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BOARD OF EDUCATION.

REGULATIONS AS TO BOARDING-OUT DEFECTIVE CHILDREN.

(Elementary Education (Defective and Epileptic Children) Act, 1899, sec. 2 (1).)

The Board of Education, by virtue and in pursuance of the powers in them vested under the Elementary Education (Defective and Epileptic Children) Act, 1899, and of every other power enabling them in this behalf, do order, and it is hereby ordered, that the following regulations be observed :—

1. A Local Education Authority may, subject to the provisions of these regulations, board-out defective children resident in their district in homes conveniently near to a school for the time being certified by the Board of Education as suitable for providing elementary education for such children, under arrangements approved by the Board of Education with the Boarding-out Committee, constituted as herein-after mentioned.

2. A Boarding-out Committee shall consist of three or more persons, to be approved by the Board of Education, who shall have signed an engagement in the form annexed to this Order (Schedule I.).

3. Any person deriving any pecuniary or other personal profit from the boarding-out of any child shall be thereby disqualified from becoming or continuing to be a member of any such Boarding-out Committee.

4. The Boarding-out Committee shall from time to time appoint one of their members to act as Secretary; and it shall be the duty of the Secretary punctually to inform the Board of Education of any vacancies which may be caused by death, resignation, or otherwise, amongst the members of the Committee, and to submit the names of the persons proposed to fill the vacancies.

5. A child may be withdrawn from a home by its parent or by the Local Education Authority of the district from which the child is sent, notice of the intention to do so being given at least one week beforehand to the Boarding-out Committee; and the foster-parent shall, upon the demand of a person duly authorised in writing by the Boarding-out Committee, or by the Local Education Authority, or by the parent, deliver up the child to such person.

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6. The Regulations to be observed by the Local Education Authority with respect to such boarding-out of defective children shall be as follows:—

- (1.) No child shall be boarded-out without the parent's consent.
- (2.) Except in the case of brothers or sisters there shall not be more than one defective child boarded-out in the same home at the same time.
- (3.) No child shall be boarded-out in a home in which, at the time when the child would first be placed in it, there would be with such child more than four children resident, or in which any poor law child is boarded-out by the Guardians.
- (4.) No child shall be boarded-out with any person who is at the time, or who has been within twelve months preceding, in receipt of relief; and if the foster-parent shall at any time become in receipt of relief, any child boarded-out with him shall be withdrawn from him.
- (5.) The Local Education Authority shall, if possible, arrange for the boarding-out being with a person belonging to the religious persuasion of the child's parent. (Section 12 of the Act.)
- (6.) No child shall be boarded-out without a certificate, in the Form annexed to this Order (Schedule II.), signed by a duly qualified medical practitioner, stating the particulars of the child's health, such certificate to be forwarded by the Local Education Authority to the Boarding-out Committee.
- (7.) Before receiving any child to be boarded-out with him, the foster-parent shall sign an undertaking in duplicate, which shall, in addition to any other matter which may be agreed upon, contain an engagement on the part of the foster-parent, that, in consideration of a certain sum per week, he will bring up the child as one of his own children, and provide the child with proper food, lodging, and washing, and endeavour to train the child in habits of truthfulness, obedience, personal cleanliness, and industry, as well as in such special industry or occupations as may be prescribed by the managers of the certified school which the child attends; that he will take care that the child shall attend duly at church or chapel according to the religious denomination to which the child belongs, and shall attend the particular certified school directed by the Local Education Authority according to the provisions of the law for the time being, and will make such provision as may be necessary for the escort of the child to and from church or chapel and school; that he will provide for the proper repair and renewal of the child's clothing, and that, in case of the child's illness,

he will forthwith report such illness to the Local Education Authority, to the child's parent, and to the Boarding-out Committee; and that he will at all reasonable times permit the child to be visited by his parent, and will at all times permit the child to be visited, and the house to be inspected by any member of the Boarding-out Committee, and by any person specially appointed for that purpose by the Local Education Authority or by the Board of Education. The undertaking shall also contain an engagement on the part of the foster-parent that he will, upon the demand of the child's parent or of a person duly authorised in writing by him or by the Boarding-out Committee, or by the Local Education Authority, give up possession of the child.

Such undertaking shall be made in triplicate according to the Form annexed to this Order (Schedule III.). One copy of it shall be kept by the foster-parent, another by the Local Education Authority, and another by the child's parent.

- (8.) On the delivery of the child to the foster-parent an acknowledgment shall be given in the Form hereinafter prescribed (Schedule IV.), or to the like effect.
 - (9.) In no case shall the sum to be paid to the foster-parent for the maintenance of a child, inclusive of lodging, but exclusive of clothing, school-fees, fees for medical attendance, medicines, and extras ordered by a medical attendant, be less than six or more than ten shillings per week.
 - (10.) Unless arrangements can be made for transit by some public conveyance, no child shall be boarded-out in a home distant more than one mile from the certified school which the child attends.
 - (11.) The managers of the certified school shall undertake to receive the child and to send to the Local Education Authority at least once a quarter a written report upon the child, in the Form annexed to this Order (Schedule V.).
 - (12.) No child shall be boarded-out in any home which is distant more than five miles by the nearest road of access from the residence of some member of the Boarding-out Committee.
7. Every boarded-out child shall be visited not less often than once in every month by a member or officer of the Boarding-out Committee at the home of the foster-parent, and the visitor shall thereupon make a report in writing to the Committee, mentioning the apparent bodily condition and the behaviour of such child, and the state of the home, and all reasonable complaints made by the child or foster-parent.
- These reports shall be forwarded by the Boarding-out Committee to the Local Education Authority and to the child's parent not less often than quarterly.

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R. SYLLS.

If in the case of any boarded-out child no such report shall be received by the Local Education Authority or the parent for the space of four consecutive months, the Local Education Authority shall in default of satisfactory explanation withdraw the child from the home with all reasonable expedition.

8.—(1) The Local Education Authority shall, as soon as practicable after the first day of April and the first day of October in every year, make a return to the Board of Education, in the Form annexed to this Order (Schedule VI.), of the several children remaining so boarded-out on those dates respectively.

(2.) The Secretary to the Boarding-out Committee shall make a return to the Board of Education as soon as practicable after the first day of January and the first day of July in every year of the several children remaining boarded-out under the supervision of the Committee on those days respectively under these Regulations. Such return shall be made according to the prescribed Form, Schedule VII. of this Order.

9. If the Board of Education shall withdraw from any Boarding-out Committee the authority to enter into arrangements with Local Education Authorities, the Local Education Authorities who have made arrangements with the said Committee for the boarding-out of children shall, on receiving notice of such withdrawal, provide with all reasonable expedition for the return of all children boarded-out in homes found by such Committee to their own homes or for their transfer to homes found by another Boarding-out Committee. Provided that it shall not be necessary for the Local Education Authority to take back such children if the Board of Education declare that the withdrawal of authority from the Committee shall not apply to children already boarded-out under their superintendence.

10. Where the arrangements made by a Local Education Authority with any Boarding-out Committee under these Regulations include the payment of any sums by such Committee on behalf of the Local Education Authority, the Local Education Authority may, if they think fit, advance to the Boarding-out Committee quarterly a sum not exceeding three-fourths of the expenditure which, in pursuance of such arrangements, may reasonably be expected to be incurred by such Committee during the ensuing quarter.

11. In this Order—

The term "foster-parent" means the persons or person with whom any child is boarded-out under the provisions of this Order.

Other expressions have, unless the contrary intention appears, the same meaning as in the Elementary Education (Defective and Epileptic Children) Act, 1899.

All words importing the masculine gender shall be deemed and taken to include females, and the singular to include the plural, and the plural the singular, unless the contrary as to gender or number is expressly provided.

ROBERT L. MORANT,

Secretary,

19th July, 1909.

SCHEDULE I.

Engagement to observe Regulations.

[We, the undersigned, being desirous of being constituted a Boarding-out Committee*] for the purpose of finding and superintending homes for defective children, do hereby, *in the event of our obtaining the requisite authority of the Board of Education to act as a Boarding-out Committee*, engage truly and faithfully to observe the Regulations of the Board of Education dated the 22nd day of July, 1907, or which may from time to time be prescribed by the Board of Education with respect to the boarding-out of Defective Children.

And We [*or I*] do also hereby undertake to furnish to the Board of Education, or to any of His Majesty's Inspectors of Schools all such reasonable information respecting children who may be boarded-out under the superintendence of the Committee as the said Board or Inspectors may from time to time require.

We desire to be known as the

Boarding-out

* In the case of a proposed addition to the Committee, substitute for the words in [] the following:—"I, the undersigned, being desirous of becoming a member of the Boarding-out Committee formed," and also omit the words in italics.

† Insert name of place or district.

Signatures in full.

Addresses.

Dated this day of 19 .

SCHEDULE II.

Medical Certificate.

Local Education Authority.

I, the undersigned, having this day personally examined C.D., aged years, residing at , hereby certify that he is not suffering from any contagious or infectious disease, and that his bodily health is good [with the exception that*]

(Signed) _____

Medical Qualifications _____

Address _____

Dated this day of 19 .

* Here state the particulars of any exceptions.

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SCHEDULE III.

Undertaking of Foster-Parent.

BOARDING-OUT OF DEFECTIVE CHILD.

Local Education Authority.

Boarding-out Committee.

Name of child's parent.

Name of child.

Religious denomination of child's parent.

Name of Foster-Parent.

Certified School which the child is to attend.

* Insert
"church,"
"chapel," or
according to the
religious denomi-
nation to which
the child's parent
belongs.

I, *A.B.*, of _____, do hereby engage with the above-named Local Education Authority, in consideration of my receiving the sum of _____ per week, to bring up *C.D.*, aged _____ years, on the _____ day of _____ last, as one of my own children, and to provide him with proper food, lodging and washing, and to endeavour to train him in habits of truthfulness, obedience, personal cleanliness, and industry, as well as in such special industry or occupation as may be prescribed by the managers of the above-named certified school; to take care that the child shall attend duly at church [or chapel*], and shall attend the above-named certified school according to the provisions of the law for the time being, and will make such provisions as may be necessary for the escort of the child to and from church [or chapel] and school; that I will provide for the proper repair and renewal of the child's clothing, and that, in case of the child's illness, I will forthwith report such illness to the Local Education Authority; to the child's parent, and to the above-named Boarding-out Committee; and that I will at all reasonable times permit the child to be visited by his parent, and will at all times permit the child to be visited and the house to be inspected by any member of the Boarding-out Committee, and by any person specially appointed for that purpose by the Local Education Authority or by the Board of Education. I do also hereby engage, upon the demand of the child's parent, or of a person duly authorised in writing by him or by the Boarding-out Committee, by the Local Education Authority, to give up possession of the child.

† Any other
matter which
may be agreed
upon may here
be added.

†
Dated this _____ day of _____ 19 _____

Signature (in full)
Foster-Parent.

Address of Foster-
Parent.

Witness to the Signature of
the Foster-Parent.

Address of Witness.

- N.B.—1. Communications to the Local Education Authority to be addressed _____
2. Communications to the Boarding-out Committee to be addressed _____
3. Communications to the child's parent to be addressed _____

SCHEDULE IV.

Acknowledgment of Foster-Parent.

_____ Local Education Authority.

I, *A.B.*, of _____, hereby acknowledge that I have this day received *C.D.*, aged _____ years, from the above-named Local Education Authority, on the terms and conditions contained in the annexed undertaking; and that I have also received for the use of the said *C.D.* the articles of clothing set out in the list appended hereto.

Dated this _____ day of _____ 19 ____.

(Signed) _____

Address _____

(Witness) _____

Address of }
Witness. }

List of Clothing.

Here set out the articles in detail.)

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SCHEDULE V.

School Manager's Report on Child.

Report for the Quarter ending

CERTIFIED SCHOOL.

Name of Child.	Date of Birth.	Name and Address of Foster-Parent.	Days absent from School during the Quarter.	Alleged Causes of Absence.	Observations as to Appearance, Conduct, and Progress of Child.	Books and Stationery and other Apparatus supplied during the Quarter.	School Fees and Cost of Books and Stationery and Apparatus.
							£ s. d.

(Signature)

(Address)

Date

N.B.—This report may be arranged in any other manner which may be deemed more convenient, provided that all the particulars above mentioned be included in it.

SCHEDULE VI.

Local Education Authority's Return to the Board of Education.

LOCAL EDUCATION AUTHORITY.

Return of the Defective Children boarded-out in Homes on the 1st day of April [or October], 19

1. Name of Child.	2. Date of Birth.	3. Name of Foster-Parent.	4. Address of Foster-Parent.	5. Boarding-out Committee under whose superintendence the Child is boarded-out.	6. Date of first Boarding-out.	7. Date of Boarding-out with present Foster-Parent if there has been a change.	8. Name of certified School attended.

Clerk to the Local Education Authority.

Date.

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10 and 16. [Circular 577.] Price 1d.; by post, 1½d.
 Circular on Risk of Fire in Schools. [Circular 587 for England; or Wales, Circular 10.]
 Price 1d.; by post, 1½d.
 Circular as to inclusion of Mensuration for certain Standards in syllabus of Examination
 in Arithmetic for Certificates of Proficiency. (Schedule III. of Code.) [Circular 598.]
 Price 1d.; by post, 1½d.
 Circular to Local Education Authorities relating to the revision of the Regulations
 affecting the Staffing of Public Elementary Schools, and the size of Classes.
 [Circular 709.] Price 1d.; by post, 1½d.
 Reports on Elementary Schools, 1852-1882, by Matthew Arnold. Price 1s.; by post, 1s. 4d.
 Report upon the Educational Work in Poor Law Schools, etc. Price 6d.; by post, 7d.
 Report by Mr. Hamilton on Public Inquiry at Swansea. [Cd. 4542.] Price 2d.; by
 post, 2½d.

Training of Teachers.

How to become a Teacher in a Public Elementary School, 1908. Price 4d.; by post, 5d.
 Regulations for the Training of Teachers for Elementary Schools, from 1st August,
 1909. [Cd. 4737.] Price 7d.; by post, 9d.
 Regulations for the Training of Teachers of Domestic Subjects, 1909. [Cd. 4603.]
 Price 1½d.; by post, 2d.
 Regulations for Training of Teachers for Secondary Schools. [Cd. 4753.] 1d.; by post, 1½d.
 Examination Papers set at the Preliminary Examination for the Elementary School
 Teachers' Certificate, 1909. Price 6d.; by post, 7d.
 Examination Papers set at the Certificate Examination, 1908. Price 6d.; by post, 7d.
 List of Persons who have passed the Preliminary Examination for the Elementary School
 Teachers' Certificate, 1909. [List 30, Part I., 1909.] Price 6d.; by parcel post, 10d.
 Statistics of the Preliminary Examination for the Elementary School Teachers' Certi-
 ficate, 1907. [List 30, Part II., 1907.] Price 6d.; by post, 7½d.
 List of Training College Students who completed their periods of training on 31st July,
 1908, and are qualified by examination for recognition as Certificated Teachers,
 1908. [List 19, 1908.] Price 6d.; by post, 8½d.
 Supplementary List of Training College Students who completed their periods of Train-
 ing on 31st July, 1907, and have since qualified by examination for recognition
 as Certificated Teachers. [Supplementary List 19, 1907.] Price 1d.; by post, 1½d.
 List of Persons who have passed the Certificate Examination of the Board of Education for
 Teachers in Elementary Schools, 1908. [List 24—Part I., 1908.] 6d.; by post, 7½d.
 Statistics of the Certificate Examination, 1907. [List 24—Part II., 1907.] Price 6d.;
 by post, 7d.

Secondary Schools and Pupil-Teacher Centres.

Regulations for Secondary Schools, from 1st August, 1909. England [Cd. 4691]; Wales
 [Cd. 4696]. Price 2d.; by post, 3d.
 Regulations for the Preliminary Education of Elementary School Teachers, 1909.
 England [Cd. 4628]. Wales [Cd. 4656]. Price 3d.; by post, 4d.
 List of Efficient Secondary Schools and recognised Pupil-Teacher Centres (England),
 1907-8. [Cd. 4374.] Price 8d.; by post, 10½d.
 Building Regulations for Secondary Schools and Pupil-Teacher Centres. [Cd. 3865.]
 Price 2d.; by post, 2½d.
 Music in Secondary Schools. Form 125 S. (G.) Price 1d.; by post, 1½d.
 Manual Instruction in Secondary Schools. [Circular 547.] Price 1d.; by post, 1½d.
 Pronunciation of Latin. [Circular 707.] Price 1d.; by post, 1½d.
 Teaching of Latin in Secondary Schools. [Circular 574, for England; or Wales,
 Circular 1.] Price 1d.; by post, 1½d.
 Teaching of Geography. [Circular 561.] Price 1d.; by post, 1½d.
 Teaching of History in Secondary Schools. [Circular 599 and explanatory Memorandum.]
 Price 1d.; by post, 1½d.
 Teaching of Geometry and Graphic Algebra. [Circular 711.] Price 1d.; by post, 1½d.
 Memorandum on Language-Teaching in State-Aided Secondary Schools in England.
 [Circular 705.] Price 1d.; by post, 1½d.
 Memorandum on Schemes for employment and Training of Student-Teachers.
 (Circular 597 for England; or Wales, Circular 15) Price 1d.; by post, 1½d.
 General Report on the Instruction and Training of Pupil-Teachers, 1903-7, England,
 with Historical Introduction. [Cd. 3582.] Price 7s. 8d.; by post, 8s.; Wales
 [Cd. 3814]. Price 2s.; by post, 2s. 2d.
 Historical Introduction to preceding, printed separately as Circular 573. 3d.; by post, 4d.

Technology, Evening Schools, and Higher Education in Science and Art.

Regulations for Technical Schools, Schools of Art and other Forms of Provision of
 Further Education, 1909-10. [Cd. 4736.] Price 2d.; by post, 3½d.
 [This publication also contains the Regulations for the Examinations held by the Board
 in the subjects of Science and Art.]
 Syllabuses and Lists of Apparatus applicable to Technical Schools, Schools of Art and
 other forms of provision of Further Education, 1908-9. Price 4d.; by post, 8d.
 List of Technical Schools, Schools of Art, and other Schools and Classes (Day and
 Evening) for Further Education in England and Wales, for the School Year ending
 31st July 1907. [List 111.] Price 7d.; by post, 9d.
 Prospectus of the Whitworth Scholarships and Exhibitions, giving subjects and condi-
 tions of examinations, etc. Price 3d.; by post, 3½d.
 Report for the year 1907 on the Victoria and Albert Museum, the Royal Colleges of
 Science and of Art, the Geological Survey and Museum, and on the Work of the
 Solar Physics Committee. [Cd. 4431.] Price 1s. 3d.; by post, 1s. 5½d.
 Prospectus of the Royal College of Art, 1908-9. Price 3d.; by post, 4d.

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R. SYLLS.

BOARD OF EDUCATION.

REGULATIONS

APPLICABLE TO

SCHOOLS FOR BLIND, DEAF,
DEFECTIVE, AND EPILEPTIC CHILDREN.

(In force from 1st September, 1909.)

Presented to both Houses of Parliament by Command of His Majesty.



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1909.

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REGULATIONS

under which

Special Grants in aid of certain Local Education Authorities in England and Wales will be paid in 1914-1915, if provision is made by Parliament for the purpose.

Presented to Parliament by Command of His Majesty.



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R. SYLLS.

Regulations under which Special Grants in aid of certain Local Authorities in England and Wales will be paid in 1914-1915, if provision is made by Parliament for the purpose.

PART I.

Grants to Authorities which received Special Grants in 1913-14.

1. In the Financial Year, 1914-15, the Board of Education may pay to each Authority—

- (a) a Special Grant of the same amount as was paid to it in the year 1913-14.
- (b) in addition thereto the amount (if any) by which the expenditure in the financial year 1912-13 met or to be met by rates exceeded (after receipt of the Special Grant based on that expenditure) the produce of a rate of twenty-one pence in that year.

2. The amount payable to each Authority under Part I. of these Regulations is specified in the Schedule attached hereto.

PART II.

Grants to Authorities which did not receive Special Grants in 1913-14.

3. If the Board of Education are satisfied that the expenditure (under Part III. of the Education Act, 1902) of a Local Education Authority which did not receive Special Grant in the year 1913-14, was, during the year ending 31st March 1913, such that the amount met or to be met by rates (subject to the limitations mentioned below) exceeded the produce of a rate of eighteen pence in the pound on the area of the Authority, the Board may make, in addition to any other Grants, a Special Grant equal to one-half of the excess.

4. The expenditure of a Local Education Authority met or to be met by rates will be ascertained from the portion of the Financial Statement relating to Elementary Education (Revenue Account), and will be the amount by which the expenditure as shown therein exceeds the income or receipts from sources other than rates; but

- (a) there will not be included in the income or receipts any balance in hand at the beginning of the year;

- (b) there will not be included in the expenditure—
- (i) any balance overdrawn at the beginning of the year, or
 - (ii) any sum applied in or towards paying off any loan raised under the Education (Provision of Working Balances) Act, 1903, or
 - (iii) any payment, direct or indirect, towards which, in the opinion of the Board, no contribution out of the Imperial Exchequer should be made.
- (c) The Board of Education may adjust the Accounts of the Authority by omitting any items of expenditure that should in their opinion have been charged to the Higher Education Account or to some other Account, or by inserting any income or receipts that should in their opinion have been shown in the Elementary Education Account, or by making any alteration which should in their opinion be made in order that the Accounts may represent the income and expenditure or the receipts and expenditure for a complete year.

PART III.

The following conditions apply to grants under both Part I. and Part II. of these Regulations :—

5. The produce of a rate of a penny in the pound on the area of any Authority will be calculated in the same way as for the purpose of Aid Grant under Section 10 of the Education Act, 1902, for the year ending 31st March 1913, except that—

(a) In the case of an Authority other than the Council of a County Borough, the Assessable Value will be the Assessable Value according to the County Rate Basis on which a County Rate was first levied in the year ending 31st March 1913 ;

(b) In the case of a County Borough, the Assessable Value will be that on which a rate to meet the expenses of Elementary Education was first levied in the year ending 31st March 1913.

6. The decision of the Board of Education as to the amount which will be paid under these Regulations to any Authority is final.

L. A. SELBY-BIGGE.

TT. DS.

SEC. SCHS.

PREL. ED.

R. SYLLS.

SCHEDULE.

Grant payable under
Part I., Section 1, of the
Regulations.

Local Education Authority.

ENGLAND.				£	s.	d.
Bacup, B.	-	-	-	383	10	3
Barking Town, U.D.	-	-	-	1,418	17	4
Batley, B.	-	-	-	243	15	7
Bilston, U.D.	-	-	-	941	13	2
Birmingham, C.B.	-	-	-	16,940	7	5
Bradford, C.B.	-	-	-	15,332	17	0
Carlisle, B.	-	-	-	1,456	8	1
Chepping Wycombe, B.	-	-	-	437	7	11
Colchester, B.	-	-	-	1,734	19	11
Coseley, U.D.	-	-	-	567	1	3
Crewe, B.	-	-	-	2,959	18	11
East Ham, B.	-	-	-	28,663	16	7
Edmonton, U.D.	-	-	-	16,375	7	11
Enfield, U.D.	-	-	-	14,781	2	9
Erith, U.D.	-	-	-	2,538	0	10
Felling, U.D.	-	-	-	383	8	5
Gateshead, C.B.	-	-	-	2,194	13	7
Gloucester, C.B.	-	-	-	2,367	5	8
Halifax, C.B.	-	-	-	9,716	10	4
Hartlepool, B.	-	-	-	1,193	11	4
Harwich, B.	-	-	-	911	14	10
Ilford, U.D.	-	-	-	4,036	15	2
Kettering, U.D.	-	-	-	1,229	10	11
Leeds, C.B.	-	-	-	13,493	12	10
Leyton, U.D.	-	-	-	17,271	4	2
Middlesbrough, C.B.	-	-	-	4,809	3	5
Northampton, C.B.	-	-	-	5,672	19	7
Norwich, C.B.	-	-	-	4,313	9	8
Oldham, C.B.	-	-	-	4,944	6	2
Reading, C.B.	-	-	-	6,187	13	7
Rotherham, C.B.	-	-	-	3,118	6	8
Rowley Regis, U.D.	-	-	-	142	17	1
Scilly, Isles of	-	-	-	102	1	9
Southampton, C.B.	-	-	-	1,529	17	1
Stockton-on-Tees, B.	-	-	-	1,856	4	2
Stoke-on-Trent, C.B. :-	-	-	-			
Burslem	-	-	-	1,533	4	11
Longton	-	-	-	2,126	6	5
Tottenham, U.D.	-	-	-	48,896	0	0
Walsall, C.B.	-	-	-	8,340	12	4
Walthamstow, U.D.	-	-	-	31,778	19	0
West Ham, C.B.	-	-	-	98,372	8	2
West Hartlepool, C.B.	-	-	-	7,559	8	0
Willesden, U.D.	-	-	-	10,652	0	5
Wolverhampton, C.B.	-	-	-	7,669	1	4
Wood Green, U.D.	-	-	-	2,498	2	3
WALES.						
Aberdare, U.D.	-	-	-	9,892	15	11
Abertillery, U.D.	-	-	-	6,366	14	10
Barry, U.D.	-	-	-	14,880	4	7
Ebbw Vale, U.D.	-	-	-	7,454	13	7
Llanelly, U.D.	-	-	-	3,009	1	4
Merthyr Tydfil, C.B.	-	-	-	12,487	9	6
Mountain Ash, U.D.	-	-	-	7,732	11	0
Pembroke, B.	-	-	-	139	3	3
Pontypridd, U.D.	-	-	-	5,371	0	2
Rhondda, U.D.	-	-	-	17,195	8	4
Swansea, C.B.	-	-	-	4,298	4	0

TOTAL - £498,534 0 8

BOARD OF EDUCATION.

REGULATIONS

FOR THE

TRAINING OF TEACHERS

OF

DOMESTIC SUBJECTS.

(In force from 1st. August, 1909.)

Presented to Parliament by Command of His Majesty.



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1913.

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EC. SCHS.

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R. SYLLS.

General.

- Report of the Board of Education for 1907-8. [Cd. 4366.] Price 7d.; by post, 9d.
 Statistics of Public Education in England and Wales, 1906-7-8.
 Part I. Educational Statistics. [Cd. 4288.] Price 2s. 3d.; by post, 2s. 7d.
 Part II. Financial Statistics. [Cd. 4506.] Price 9d.; by post, 11½d.
 Reports from Universities and University Colleges, 1906-7. [Cd. 4440.] Price 1s. 9d.; by post, 2s. 1d.
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 General Introduction to the following Return [H.C. 178; 1906], with Appendices, Tables, Summaries, &c. [H.C. 231; 1907.] Price 2s. 3d.; by post, 2s. 7d.
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 List of Public Elementary Schools and Certified Efficient Schools on 31st July, 1908. England [List 21]. Price 2s. 6d.; by post, 2s. 10d.; [List 21 (Wales)]. Price 4s.; by post, 5d.
 The Building Regulations. England [Cd. 3571]. Price 2d.; by post 2½d.; Wales—Price, ditto.
 Regulations applicable to Schools for Blind, Deaf, Defective, and Epileptic Children. [Cd. 3636.] (With modifying minute of 30th June, 1908 [Cd. 4165]). Price 3d.; by post, 4d.
 List of Certified Schools for Blind, Deaf, Defective, and Epileptic Children in England and Wales on 31st July, 1908. [Cd. 4372.] Price 2d.; by post, 3d.
 Regulations and Conditions respecting Certified Efficient Schools. [Cd. 3944.] Wales [Cd. 3984]. Price 1d.; by post, 1½d.
 Regulations providing for Special Grants in aid of certain Local Education Authorities in England and Wales in 1908-9. [Cd. 4400.] Price ½d.; by post, 1d.
 Revised Regulations of the 21st March, 1901, as to Certificates of Age, Proficiency, and School Attendance. [Cd. 532.] Price 1d.; by post, 1½d.
 Elementary School Teachers Superannuation Rules, 1899. (Statutory Rules and Orders No 174.) Price 1d.; by post, 1½d.
 Annuity Tables. Price 1d.; by post, 1½d.
 A Pamphlet containing the above Tables and Rules and additional Rules, 1904, 1905, and 1907, the Elementary School Teachers (Superannuation) Act, 1898, together with an explanatory Memorandum (Circular 424) and Circular 563, is at present under revision.
 Suggestions for the Consideration of Teachers and others concerned in the work of Public Elementary Schools. [Cd. 2638.] Price 8d.; by post, 10½d.
 Suggestions on Rural Education, by T. S. Dymond, H.M.I., together with Specimen Course of Nature Study, Gardening, and Rural Economy. Price 3d.; by post, 4d.
 Special Report on the Teaching of Cookery to Public Elementary School Children. Price 2d.; by post, 3d.
 Syllabus of Physical Exercises for Public Elementary Schools. [At present under revision.] Circular to Local Education Authorities on the Education (Provision of Meals) Act, 1906. [Circular 552.] Price 1d.; by post, 1½d.
 Memorandum on Medical Inspection of Children in Public Elementary Schools under Section 13 of the Education (Administrative Provisions) Act, 1907. [Circular 576.] Price 2d.; by post, 2½d.
 Circular on details of Medical Inspection, with specimen schedule for report on Children. [Circular 582.] Price 1d.; by post, 1½d.
 Circular on Medical Inspection, including functions of School Medical Officer, Local Education Authority's Report, &c. [Circular 596.] Price 1d.; by post, 1½d.
 Memorandum on the Education (Administrative Provisions) Act, 1907, except Sections 15 and 16. [Circular 577.] Price 1d.; by post, 1½d.
 Circular on Risk of Fire in Schools. [Circular 587 for England; or Wales, Circular 10.] Price 1d.; by post, 1½d.

BOARD OF EDUCATION.

REGULATIONS

FOR THE

TRAINING OF TEACHERS

OF

DOMESTIC SUBJECTS.

(In force from 1st August, 1909.)

Presented to Parliament by Command of His Majesty.



LONDON :

PRINTED UNDER THE AUTHORITY OF HIS MAJESTY'S
STATIONERY OFFICE

By DARLING AND SON, LTD., BACON STREET, E.

To be purchased, either directly or through any Bookseller, from
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1913.

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REGULATIONS FOR THE TRAINING OF TEACHERS OF DOMESTIC SERVICE.

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NOTE.

The Regulations for 1909 are reprinted from the Regulations for 1908, with
no alteration except a few verbal corrections.

CHAPTER I.

CURRICULUM, STAFF AND ORGANISATION.

1. For the purposes of these Regulations a Training School is an institution for giving instruction in the principles and practice of teaching Domestic Subjects to persons who are preparing to become Teachers of those subjects in Public Elementary Schools or other Schools approved by the Board.

No Grant will be paid under these Regulations to any such Institution which does not comply with the conditions set forth in this and the following chapters, nor will any Diploma be recognised unless it is issued in compliance with the conditions of Chapters III. and IV. ; but the Board may, after considering all the circumstances, recognise the Diplomas issued by a Training School which either does not apply for Grant, or fails to qualify for Grant through non-compliance with some one or more of the conditions contained in Chapter I., provided that the work of the School and of the Students reaches an adequate level of efficiency.

A. CURRICULUM.

2. The Courses of Training must be specially designed for students training for Diplomas for Domestic Subjects, and no other persons may be allowed to attend any part of the Courses unless the special sanction of the Board has been obtained. The Courses of Training must be approved by the Board, and careful records must be kept of the work done and the progress shown by each student.

3. Time Tables showing the full extent of the work done by students training for Diplomas for Domestic Subjects must be submitted for the approval of the Board at the beginning of each term.

4. The Course of Instruction should be given during the daytime, with the exception of the instruction required for practice in teaching a class of adults by means of demonstration, which may be taken at Evening Classes. The instruction should be continuous, and should occupy the full time of the students, except in cases for which the special sanction of the Board has been obtained.

5. Except with the approval of the Board, students must not be prepared for, or allowed to enter for, any Examinations other than the Examinations under these Regulations, or Examinations conducted by the Teaching Staff of the Training School in order to test the progress of the students.

B. TEACHING STAFF.

6. The Teaching Staff must be adequate and efficient. The names and qualifications of all Teachers selected for appointment

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ment must be submitted to the Board for their confirmation of the appointment before it is actually made. Teachers will be expected to have First Class Diplomas for the subjects which they teach, together with such other qualifications and such previous experience as the Board can approve.

The Board will in future, as a rule, require that teachers shall have qualified for the full endorsement of their Diplomas under Article 33 (c) before they are appointed to posts upon the staff of Training Schools; but this rule will not be applied to teachers who became entitled to Diplomas before the 1st of August, 1908.

7. The Superintendent of the school and the teachers must be paid by fixed and adequate salaries. They must not engage in any other employment which will prevent the efficient discharge of their duties.

C. ADMISSION AND FEES.

8. No student may be refused admission on other than reasonable grounds.

9. A student shall not be required, as a condition of being admitted into or remaining in the school, to attend or abstain from attending any Sunday School, place of religious worship, religious observance, or instruction in religious subjects in the school or elsewhere; and the times for religious worship or for any lesson on a religious subject shall be conveniently arranged for the purpose of allowing the withdrawal of any such scholar therefrom.

10. The fees must be approved by the Board.

11. (a) Students must be not less than 18 years of age, and must satisfy the Authorities of the Training School as to their physical capacity before being admitted to a Course of Training.

(b) The arrangements regulating the admission of students must be such as to exclude any student who, from want of sufficient preliminary education, or other cause, is not qualified to take advantage of the instruction.

In future Regulations some minimum requirement of general education may be laid down.

12. (a) No Grant will be paid in respect of any student unless she has made a Declaration that she enters the Training School with the intention of eventually becoming a Teacher of Domestic Subjects in a school approved by the Board for this purpose.

(b) The Schools approved by the Board for this purpose will include any Public Elementary School, and any School certified under the Elementary Education (Blind and Deaf Children) Act, 1893, or under the Elementary Education (Defective and Epileptic Children) Act, 1899, and any Poor Law School, Certified Industrial School, Day Industrial School, or Certified

Reformatory in England or Wales, and any Army or Navy School, and any Secondary School, Pupil-Teacher Centre, Training College, or Training School for Teachers of Domestic Subjects, in respect of which Grants are paid by the Board out of monies provided by Parliament. The Board may also, upon special application, approve other Schools for the purpose of this Section.

D. MANAGEMENT.

13. The Training School must be superintended by a responsible Governing Body, of whom at least one-third must be women. The names of the Governing Body must be furnished to the Board. A person must be appointed to act as Correspondent on behalf of the Governors.

14. The premises must be sanitary, convenient for teaching purposes, adapted to the circumstances of the school, and provided with such equipment and appliances as are necessary for the approved courses of instruction. The plans of site and buildings, whether for new schools or for enlargement of existing schools, must be submitted to the Board for approval.

15. The Training School must be open to inspection by the Board, and at least a week's notice must be given to the Inspector of every day or period during which it will be closed.

16. The school must be suitable in character and financial position to receive aid from the Board, and must not be conducted for private profit, or farmed out to the teacher.

The school must have adequate local support. At least 25 per cent. of the expenditure of the school should be met from sources other than the Board's grant, such as fees, subscriptions, grants from the Local Authority, or endowments.

17. All returns, statistical and financial, called for by the Board from the Governing Body must be duly made.

18. The Grant must be expended to the satisfaction of the Board.

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CHAPTER II.

GRANTS.

19. Grants will be made by the Board of Education in respect of students attending Courses of Training for Diplomas for Domestic Subjects recognised by the Board under these Regulations. If any of the conditions of the award of grant are not fulfilled, the Board may withhold the Grant, or if they think fit, pay it with or without deductions with a warning that a Grant will not again be paid in similar circumstances.

The decision of the Board as to whether the conditions have been fulfilled in any case is conclusive.

20. Grant will be paid to the Governing Body appointed in accordance with Article 13 above ; or, in the case of a school maintained by a Local Education Authority, Grant will be paid to the Authority.

21. Grants will be paid to the Training Schools in respect of students who complete in accordance with these Regulations Courses for Diplomas for Domestic Subjects recognised by the Board. The rates of Grant will not exceed the following scale :—

£7 for each student completing a Course for a full Diploma for Cookery.

£2 for each student completing a Course for a Limited Diploma for Cookery.

£3 for each student completing a Course for a Diploma for Laundry Work.

£2 for each student completing a Course for a Diploma for Housewifery.

£12 for each student completing a Course for a Diploma for Combined Domestic Subjects.

22. The Grant will be payable at the end of the year (ending July 31st) during which the candidate completes a Course upon which Grant is claimed.

In the case of students training for the Combined Diploma a proportionate Grant will be payable at the end of each year (ending July 31st) within which falls a part of their Course.

The Board have it in contemplation to pay in future all Grants in respect of students in training for Diplomas in Domestic Subjects by means of terminable instalments.

For the year ending July 31st, 1910, an adjustment in the amount of Grant will be made in the case of any student whose attendances at a part of a Course upon which grant is claimed have been included in any previous year in a claim under Section 42 of the Regulations for Technical Schools, Schools of Art, and other Schools and Classes for Further Education.

23.—(a) A student may not be recognised for the purpose of a Grant under these Regulations in respect of a period for which any Grant is made on account of that student by the Board under any other Regulations.

(b) No Grant will be paid in any circumstances in respect of a student who is undergoing a further period of training with a view to raising the class of her Diploma under Article 30.

24. The rate of Grant will be determined in each case by the Board, after consideration of the report of the Inspector upon the standard, character, and efficiency of the instruction and equipment of each school; and, in the case of each student, the amount of Grant will depend upon the regularity of attendance at the Course upon which Grant is claimed, and upon the report of the Inspector as to the fitness of the student to profit by the Course of Instruction.

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CHAPTER III.

GENERAL CONDITIONS FOR THE AWARD OF
DIPLOMAS.

25.—(a) The Board are prepared to recognise Diplomas, granted by recognised Training Schools, of the following types:—

- (i) A Full Diploma for Cookery.
- (ii) A Limited Diploma for Cookery.
- (iii) A Diploma for Laundry Work.
- (iv) A Diploma for Housewifery.
- (v) A Diploma for Combined Domestic Subjects.

(b) Diplomas of each of these types, except the Limited Diploma for Cookery, may be of a First Class or of a Second Class, according to the degree of merit shown by the Candidate. The Limited Diploma for Cookery must be of one Class only.

The Board have it in contemplation to restrict all Diplomas to one Class only at some future date.

(c) Any Training School may grant diplomas of one or more of these types, provided that in each case the Board are satisfied that the Training School is able to give a suitable course of training leading up to whatever type of Diploma is offered.

26. In the award of a Diploma in any one of these subjects the Training School must take into account:—

- (a) the records of the work done and the progress shown by the student during the Course of Training;
- (b) the results of an examination in the subject of the Diploma conducted by or on behalf of the School on a Syllabus approved by the Board (see Chapter IV.);
- (c) the results of an examination in Science in connection with Domestic Subjects conducted by or on behalf of the School on a Syllabus approved by the Board;
- (d) the results of an examination in the Theory of Education with special reference to the teaching of Domestic Subjects conducted by or on behalf of the School on a Syllabus approved by the Board.

The examinations in (c) and (d) are not required from candidates for a Limited Diploma in Cookery.

27.—(a) Every Examination forming part of the test for a Diploma must be efficiently conducted by expert Examiners whose appointment in the case of any particular Training School

has been approved by the Board. These Examiners must not be managers of the Training School or in any way connected with the training of the candidates. The Examination Papers must be marked in accordance with the principles adopted in the Board's own Examinations as set out in the Rules contained in Appendix A. to these Regulations.

(b) A month's notice must be given to the Board of the date or dates on which every Examination forming part of the test for a Diploma will be held. Full Time Tables of each examination are required by the Board at as early a date as is possible.

(c) The results of every such examination must be forwarded to the Board for confirmation, before they are announced to the candidates in the form of a list of the names of the candidates examined, showing the number of hours of training which each candidate has completed and the number of marks obtained by each candidate in each subject. This must always be accompanied by copies in duplicate of all papers of questions set, and by statements of all practical tests employed in the Examination, together with statements of the maximum marks assigned to each question or test. The Board may also, if they think fit, in the case of any Examination, call for specimens of the papers worked by the candidates showing the marks awarded for each question.

28. At the end of the Course of Training, after the completion of all Examinations required for a Diploma, a Schedule must be forwarded to the Board showing, in the case of each candidate for a Diploma, the full nature of the proposed award, and giving (a) a statement of the number of marks obtained by the candidate in each subject of examination together with the maximum number of marks assigned to each paper, and (b) a statement of the number of marks given to each candidate upon the records of training, together with the maximum number of marks assigned to those records. The Board may, if they think fit, in the case of any candidate, call for the papers worked by that candidate at any Examination, and for any further information regarding that candidate which they may require. Until these Schedules have been approved no results of any Examination may be considered to be more than provisionally confirmed and no Diploma may be issued to the candidate.

29.—(a) No First Class Diploma may be granted to any candidate who has not obtained at least 80 per cent. of the maximum number of marks obtainable upon the records of training under Article 26 (a) and the results of the examination under Article 26 (b) taken together; and no Second Class Diploma (or Limited Diploma for Cookery) may be granted to any candidate who has not similarly obtained at least 60 per cent. of the maximum number of such marks.

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(b) The standard of attainment necessary for success in the qualifying examinations in Science and Theory of Education under Article 26 (c) and (d) must be substantially equivalent to that required under previous Regulations in order to obtain Diplomas of the First Class.

30.—(a) A candidate who has failed to obtain the number of marks under Article 29 (a) necessary to obtain a Diploma (or a First Class Diploma, as the case may be) may be re-examined after an interval of three months. No candidate may be re-examined more than once.

In the case of the Housewifery Diploma, candidates may be re-examined after a shorter interval if the special sanction of the Board be obtained.

(b) Re-examination for the purposes of Article 29 (a) must cover all the portions of the subject included in the examination under Article 26 (b) save where the Board are satisfied, on the application of the Authorities of the Training School, that the candidate has given evidence of such merit in any section or sections of her original examination as to render her re-examination in that section or those sections unnecessary.

31. All Diplomas granted to students must be endorsed by the Board of Education before issue.

32. The form of Diploma proposed by each Training School must be submitted to the Board for approval, and must show clearly the Training School by which it is granted.

33.—(a) A person who has obtained a Limited Diploma in Cookery issued in accordance with these Regulations will be provisionally recognised by the Board, for a period of two years from the date on which it was due, as qualified to teach Cookery as a School Course as defined by Schedule III. 2. of the Code, to the children in the Public Elementary School (not being a Higher Elementary School) of the staff of which she is a member, but in no other School.

(b) A person holding a Diploma, other than a Limited Diploma for Cookery, issued in accordance with these Regulations, will be provisionally recognised by the Board, for a period of two years from the date on which it was due, as qualified to teach the subject to which it relates to scholars in Public Elementary Schools, whether the instruction is given in School Courses, as defined by Schedule III. 2. of the Code or in Centre Courses, or in Higher Elementary Schools.

(c) When a teacher has been employed during two years in giving actual instruction in the subject to which her Diploma relates in Public Elementary Schools, the Board may endorse her Diploma for full recognition in such schools if a favourable report from the Woman Inspector has been received.

(d) If, at the end of the period for which a Diploma has been provisionally recognised, the Woman Inspector is unable

to report favourably upon the teacher, the Board may, after considering the report of the Inspector, either withdraw recognition of the Diploma altogether or continue to recognise the Diploma provisionally for such further period as may be decided in the particular case.

34. A Diploma, other than a Limited Diploma for Cookery, issued in accordance with these Regulations, will be regarded by the Board as a *prima facie* qualification for teaching the subject to which it relates to scholars in Secondary Schools, or to persons under instruction in Technical Schools, or in any other Schools or Classes (Day or Evening) recognised as efficient by the Board. But the recognition of the teacher will be liable to withdrawal if, on inspection or otherwise, the Board find reason for this.

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CHAPTER IV.

SPECIAL CONDITIONS FOR THE AWARD OF DIPLOMAS.

(i.) *The Full Diploma for Cookery.*

35. (a) In order to obtain a Full Diploma for Cookery candidates must have been trained in some Training School of Cookery, recognised by the Board, for not less than 840 hours. Of these 840 hours, not less than 80 hours and not more than 100 hours must have been occupied under proper supervision with the teaching of classes of children attending Public Elementary Schools, and in criticism lessons, and of this time at least 40 hours must have been spent by each student in individual practice in teaching.

(b) Candidates who have not already obtained a Diploma in Laundry Work must, in addition, undergo a Course of Instruction in Science of not less than 80 hours, and in Education of not less than 40 hours.

36. (a) The Examination must cover both Theory and Practice and must include, as regards Theory, (i) a paper in the Principles of Cookery, and as regards Practice, individual tests in (ii) Practical Cookery, (iii) Teaching Cookery to a class of children by means both of demonstration and practice, and (iv) Teaching Cookery to a class of adults by means of demonstration.

The marks accorded to the Examination should be divided between Theory and Practice in such a way that the maximum number of marks accorded to Theory does not exceed one-fourth of the maximum number of marks accorded to the whole Examination.

(b) Students may not be examined in Theory until they have completed 500 hours of training, or in Practice until they have completed 700 hours of training.

(ii.) *The Limited Diploma for Cookery.*

(37) (a) Candidates for this Diploma must be persons recognised by the Board as Certificated Teachers, and must have been trained in some Training School of Cookery, recognised by the Board, for not less than 280 hours.

(b) Of the above-named 280 hours, 26 hours at least must have been spent, under proper supervision, in individual

practice in teaching Cookery to classes of children attending Public Elementary Schools.

N.B.—It is advisable that Certificated Teachers should complete their training for the Limited Diploma in fourteen weeks. Should this be impossible they are advised to devote to it seven hours per week, but in no case should the Time Table of the Training School provide for less than five hours' instruction in a week in this subject.

38. The Examination of candidates for the Limited Diploma must include all the subjects prescribed, both in Theory and in Practice, for the Full Diploma.

(iii.) *The Diploma for Laundry Work.*

39. (a) In order to obtain a Diploma for Laundry Work, candidates must have been trained in a Training School of Laundry Work, recognised by the Board, for not less than 460 hours. Of these 460 hours, not less than 60 hours or more than 80 hours must have been occupied, under proper supervision, with the teaching of classes of children attending Public Elementary Schools, and in criticism lessons, and of this time not less than 30 hours must have been spent by each student in individual practice in teaching.

(b) Candidates who have not already obtained a Full Diploma in Cookery must, in addition, undergo a Course of Instruction in Science of not less than 80 hours, and in Education of not less than 40 hours.

40. (a) The Examination must cover both Theory and Practice and must include, as regards Theory, (i) a paper in the Principles of Laundry Work, and, as regards Practice, individual tests in (ii) Practical Laundry Work, (iii) Teaching Laundry Work to a class of children by means both of demonstration and practice, and, (iv) Teaching Laundry Work to a class of adults by means of demonstration.

The marks accorded to the Examination should be divided between Theory and Practice in such a way that the maximum number of marks accorded to Theory does not exceed one-fourth of the maximum number of marks accorded to the whole Examination.

(b) Students may not be examined in Theory until they have completed 320 hours of training, or in Practice until they have completed 440 hours of training.

(iv.) *The Diploma for Housewifery.*

41. (a) In order to obtain a Diploma for Housewifery, candidates must have been trained in a Training School of Housewifery recognised by the Board, for not less than 300 hours.

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(b) No candidate will be considered eligible for this Diploma who does not hold Diplomas for Cookery and Laundry Work recognised by the Board.

42. [Cancelled.]

43. (a) The Examination must cover both Theory and Practice, and must include (i) a paper in the Principles of Housewifery and (ii) individual tests in Practical Housewifery.

The marks accorded to the Examination should be divided between Theory and Practice in such a way that the maximum number of marks accorded to Theory does not exceed one-fourth of the maximum number of marks accorded to the whole Examination.

(b) Students may not be examined either in Theory or Practice until they have completed 250 hours of training.

(v.) *The Diploma for Combined Domestic Subjects.*

44. (a) In order to obtain a Diploma for Combined Domestic Subjects, candidates must have been trained in some Training School for Teachers of Domestic Subjects, recognised by the Board, for not less than 1,600 hours.

(b) Of the 1,600 hours required, 840 must be devoted to Cookery, 460 to Laundry Work, and 300 to Housewifery. The instruction in Cookery, Laundry Work, and Housewifery must include in each case both the Theory and the Practice of the subject, and every student must obtain experience in the actual teaching both of Cookery and of Laundry Work to classes of children attending Public Elementary Schools in the manner and to the extent required by Sections 35 and 39 respectively. Some experience must also be obtained in the methods of demonstration in Housewifery.

(c) In addition to the 1,600 hours required under (a) above, candidates must undergo a course of instruction in Science of not less than 80 hours, and in Education of not less than 40 hours.

45. (a) The Examination must cover both Theory and Practice and must include, as regards Theory, (a) papers in the Principles of each subject, and, as regards Practice, individual tests in (b) Practical Work in each subject, (c) Teaching a class of children both Cookery and Laundry Work by means of both demonstration and practice, and (e) Teaching a class of adults by means of demonstration.

The marks accorded to the Examination should be divided between Theory and Practice in such a way that the maxi-

mum number of marks accorded to Theory does not exceed one-fourth of the maximum number of marks accorded to the whole Examination.

(b) Students may not be examined in Theory until they have completed 1,000 hours of training, or in Practice until they have completed 1,400 hours of training.

ROBERT L. MORANT.

3rd April, 1909.

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APPENDIX A.

RULES FOR MARKING EXAMINATION PAPERS.

N.B.—It will be found convenient to have all answers written in separate books for each paper and not on loose foolscap sheets.

1. The marks for each question should be entered distinctly in a space to be provided opposite the answer, preferably in coloured pencil. The total marks should be entered in a space provided in the cover of the Examination Book.

2. Especial care must be taken to ensure that every answer for which credit may be given is marked, that the total number of marks entered on the cover of the book is correct, and that the candidates have strictly observed any instructions set forth on the examination papers or otherwise given to them. Answers written on the left hand pages of the books, and those given in excess of the number allowed, should not be marked. The *last* excess answer, or answers, must be ignored.

3. To ensure accuracy, each book of answers, after revision by one person, should be looked through by another, in order that the correctness of the addition of the marks may be verified and any omissions detected.

4. All mistakes in the answers must be indicated, preferably in coloured pencil, except slight faults in composition and spelling, which, in ordinary cases, may be disregarded in awarding the marks.

5. In work involving the use of arithmetic, slight errors in calculation will often lead to entirely wrong results. Mistakes of this kind should be dealt with leniently.

6. In awarding marks due weight should be attached to the logical arrangement of the answers and to the accuracy and suitability of expression as well as to the correctness of the facts.

APPENDIX B.

LIST OF RECOGNISED TRAINING SCHOOLS FOR TEACHERS OF DOMESTIC SUBJECTS WITH THE ADDRESSES OF THEIR CORRESPONDENTS.

Name of School.	Name and Address of Correspondent.
Bath, School of Cookery and Domestic Science.	A. Godfrey Day, Esq., Director of Technical Education, Technical School, Guildhall, Bath.
Birmingham, Training School for Teachers of Cookery and Laundry Work.	J. A. Palmer, Esq., Education Department, Edmund Street, Birmingham.
Bristol, Municipal Training School of Domestic Science.	W. Avery Adams, Esq., Higher Education Committee, Guildhall, Bristol.
Cardiff, South Wales, and Monmouth Training School of Cookery and the Domestic Arts.	Miss H. Davies, University College of South Wales, Cardiff.

APPENDIX B.—continued.

Name of School.	Name and Address of Correspondent.
Gloucester, Gloucestershire School of Domestic Science.	Mrs. Foster, Lennox House, Spa, Gloucester.
Leeds, Yorkshire Training School of Cookery.	James Graham, Esq., Education Offices, Calverley Street, Leeds.
Leicester, Municipal Training College for Domestic Subjects (late North Midland School of Cookery).	T. Groves, Esq., Education Office, Town Hall, Leicester.
Liverpool, Training School of Cookery	Miss Fanny L. Calder, 49, Canning Street, Liverpool.
London—Battersea, The Polytechnic	S. G. Rawson, Esq., Battersea Polytechnic Institute, S.W.
London—Holloway, The Northern Polytechnic.	Dr. R. S. Clay, Northern Polytechnic Institute, Holloway, N.
London—Hampstead, The National Society' Training College for Teachers of Domestic Subjects.	T. Baines, Esq., Berridge House, Fortune Green Road, W. Hampstead, N.W.
London—Westminster, The National Training School of Cookery.	Mrs. Charles Clarke, National Training School of Cookery, Buckingham Palace Road, S.W.
Manchester, School of Domestic Economy.	J. H. Reynolds, Esq., Municipal School of Technology, Sackville Street, Manchester.
Newcastle - on - Tyne, Northern Counties Training School of Cookery.	T. C. Major, Esq., 10, West Street, Gateshead.
Norwich, Norfolk and Norwich School of Cookery.	Mrs. Gurney Buxton, School of Cookery, St. George's Plain, Norwich.
Preston, Harris Institute - -	Lt. Col. Jolly, Harris Institute, Preston.
Sheffield, School of Cookery and Domestic Science.	G. S. Baxter, Esq., Education Committee, Leopold Street, Sheffield.
Trowbridge, Wiltshire School of Cookery.	Miss Mary Smith, School of Cookery, Trowbridge.

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APPENDIX C.

TABLE OF DIPLOMAS ISSUED AND FEES CHARGED BY RECOGNISED
TRAINING SCHOOLS FOR TEACHERS OF DOMESTIC SUBJECTS.

Name of School.	Diplomas Recognised	Length of Course.	Fee Charged.	Remarks.
Bath, School of Cookery and Domestic Science.	Cookery.	4 Terms	£ s. d. 18 18 0	For the first 4 terms, Cookery and Laundry Work are taken concurrently, and for the last two terms Laundry Work and Housewifery are taken concurrently.
	Laundry Work.	6 Terms	9 9 0	
	Housewifery.	2 Terms	6 6 0	
Birmingham, Training School for Teachers of Cookery and Laundry Work.	Cookery.	4 Terms	30 0 0	For the first month Candidates are regarded as probationers.
	Laundry Work.	2 Terms	12 0 0	
Bristol, Municipal Training School of Domestic Science.	Cookery.	4 Terms	22 11 6	The Fee for Laundry Work is 10l. 10s. 0d. for Students who have been trained for Cookery.
	Laundry Work.	2 Terms	11 14 0	
	Housewifery.	1 Term	10 10 0	
	Combined Diploma.	6 Terms	40 0 0	
Cardiff, South Wales and Monmouth Training School of Cookery and the Domestic Arts.	Cookery.	4 Terms	28 7 0	An Additional Fee of 1l. 1s. 0d. is charged on entrance.
	Laundry Work.	2 Terms	13 13 0	
	Housewifery.	1 Term	8 8 0	
Gloucester, Gloucestershire School of Domestic Science.	Cookery.	3 to 4 Terms.	Fee 9l. per term for the first year, 8l. per term for each succeeding term of the period of training.	
	Laundry Work.	2 Terms		
	Housewifery.	1 Term		
	Combined Diploma.	6 Terms		
Leeds, Yorkshire Training School of Cookery.	Cookery.	4 Terms	29 1 0	
	Laundry Work.	2 Terms	16 14 6	
	Housewifery.	1 term	10 8 6	
Leicester, Municipal Training College for Domestic Subjects (late North Midland School of Cookery).	Cookery.	3 Terms	25 0 0	
	Laundry Work.	2 Terms	12 12 0	
	Housewifery.	1 Term	10 10 0	
Liverpool, Training School of Cookery.	Cookery.	3 Terms	21 10 0	An Additional Fee of 1l. 10s. is charged on entrance.
	Laundry Work.	2 Terms	12 12 0	
	Housewifery.	1 Term	10 10 0	
London—Battersea, The Polytechnic.	Cookery.	3 Terms	32 0 0	
	Laundry Work.	2 Terms	11 11 0	
	Housewifery.	1 Term	10 10 0	
	Combined Diploma.	6 Terms	52 0 0	

APPENDIX C.—continued.

Name of School.	Diplomas Recognised.	Length of Course.	Fee Charged.	Remarks.
London—Holloway, The Northern Polytechnic.	Cookery.	3 Terms	£ 32 0 0	Candidates taking full course preferred. The length of course and Fee charged for the Housewifery Diploma are increased if it is not taken in connection with one or both of the other Diplomas.
	Laundry Work.	2 Terms	11 11 0	
	Housewifery.	1 Term	10 10 0	
	Combined Diploma.	6 to 7 Terms.	52 0 0	
London — Hampstead, The National Society's Training College for Teachers of Domestic Subjects.	Cookery.	3 Terms	21 5 0	Students required to enter on probation and leave if they are not suitable persons for training as teachers.
	Laundry Work.	2 Terms	11 15 0	
	Housewifery.	1 Term	7 11 0	
	Cookery.	42 weeks	40 0 0	
	Cookery Limited.	16 weeks	12 12 0	
	Laundry Work.	26 weeks	11 2 6	
London — Westminster, The National Training School of Cookery.	Housewifery.	15 weeks	11 2 6	* Cost of provisions, 18%, in addition to Tuition Fee.
	Cookery.	3½ Terms	*30 0 0	
	Laundry Work.	2 Terms	15 15 0	
	Housewifery.	1 Term	7 7 0	
Manchester, School of Domestic Economy.	Cookery.	3½ Terms	30 0 0	Fee for Housewifery Course 6l. 10s. 0d. for Students previously trained at the School.
	Cookery Limited.	1 Term	8 8 0	
	Laundry Work.	2 Terms	13 17 0	
	Housewifery.	1 Term	7 11 0	
Newcastle - on - Tyne, Northern Counties Training School of Cookery.	Cookery.	3 Terms	22 5 0	Wilts Students pay half fees.
	Cookery Limited.	1 Term	7 7 0	
	Laundry Work.	2 Terms	11 15 0	
	Housewifery.	1 Term	9 13 0	
Norwich, Norfolk and Norwich School of Cookery.	Combined Diploma.	5 Terms	—	Wilts Students pay half fees.
	Cookery.	4 Terms	26 19 0	
	Cookery Limited.	1 Term	19 0 0	
	Laundry Work.	2 Terms	11 2 0	
Preston, Harris Institute	Housewifery.	1 Term	9 18 0	Wilts Students pay half fees.
	Cookery.	3 Terms	29 8 0	
	Cookery Limited.	1 Term	8 8 0	
	Laundry Work.	2 Terms	12 12 0	
Sheffield, School of Cookery and Domestic Science.	Housewifery.	1 Term	7 7 0	Wilts Students pay half fees.
	Cookery.	3 Terms	29 8 0	
	Cookery Limited.	1 Term	8 8 0	
	Laundry Work.	2 Terms	12 12 0	
Trowbridge, Wiltshire School of Cookery.	Housewifery.	1 Term	7 7 0	Wilts Students pay half fees.
	Cookery.	3 Terms	20 8 0	
	Laundry Work.	2 Terms	12 0 0	
	Housewifery.	1 Term	7 16 0	

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Arithmetic for Certificates of Proficiency. (Schedule III. of Code.) [Circular 598.] Price 1d.; by post, 1½d.

Circular to Local Education Authorities relating to the revision of the Regulations affecting the Staffing of Public Elementary Schools, and the size of Classes. [Circular 709.] Price 1d.; by post, 1½d.

Reports on Elementary Schools, 1852-1892, by Matthew Arnold. Price 1s.; by post, 1s. 4d.
Report upon the Educational Work in Poor Law Schools, &c. Price 6d.; by post, 7d.
Report by Mr. Hamilton on Public Inquiry at Swansea. [Cd. 4542.] Price 2d.; by post, 2½d.

Training of Teachers.

How to become a Teacher in a Public Elementary School, 1908. Price 4d.; by post, 5d.

Regulations for the Training of Teachers for Elementary Schools, from 1st August, 1908. [Cd. 4169.] Price 7d.; by post, 9d.

Regulations for the Training of Teachers of Domestic Subjects, 1908. [Cd. 4173.] Price 1½d.; by post, 2d.

Regulations for the Training of Teachers for Secondary Schools. [Cd. 4184.] Price 1d.; by post, 1½d.

Examination Papers set at the Preliminary Examination for the Elementary School Teachers' Certificate, 1908. Price 6d.; by post, 7d.

Examination Papers set at the Certificate Examination, 1908. Price 6d.; by post, 7d.

List of Persons who have passed the Preliminary Examination for the Elementary School Teachers' Certificate, 1908. [List 30, Part I., 1908.] Price 6d.; by parcel post, 10d.

Statistics of the Preliminary Examination for the Elementary School Teachers' Certificate, 1907. [List 30, Part II., 1907.] Price 6d.; by post, 7½d.

List of Training College Students who completed their periods of training on 31st July, 1907, and are qualified by examination for recognition as Certificated Teachers, 1907. [List 19.] Price 6d.; by post, 8½d.

Supplementary List of Training College Students who completed their periods of Training on 31st July, 1906, and have since qualified by examination for recognition as Certificated Teachers. [Supplementary List 19, 1906.] Price 1d.; by post, 1½d.

List of Persons who have passed the Certificate Examination of the Board of Education for Teachers in Elementary Schools, 1908. [List 24—Part I., 1908.] Price 6d.; by post, 7½d.

Statistics of the Certificate Examination, 1907. [List 24—Part II., 1907.] Price 6d.; by post, 7d.

Secondary Schools and Pupil-Teacher Centres.

Regulations for Secondary Schools, from 1st August, 1908. England [Cd. 4037]; Wales [Cd. 4144.] Price 2d.; by post, 2½d.

Regulations for the Preliminary Education of Elementary School Teachers, 1908. England [Cd. 4038.] Price 2½d.; by post, 3½d. Wales [Cd. 4066.] Price 3d.; by post, 4d.

List of Efficient Secondary Schools and recognised Pupil-Teacher Centres (England), 1907-8. [Cd. 4374.] Price 8d.; by post, 10½d.

Building Regulations for Secondary Schools and Pupil-Teacher Centres. [Cd. 3865.] Price 2d.; by post, 2½d.

Music in Secondary Schools. Form 125 S. (G.). Price 1d.; by post, 1½d.

Manual Instruction in Secondary Schools. [Circular 547.] Price 1d.; by post, 1½d.

Pronunciation of Latin. [Circular 707.] Price 1d.; by post, 1½d.

Teaching of Latin in Secondary Schools. [Circular 574, for England; or Wales, Circular 1.] Price 1d.; by post, 1½d.

Teaching of Geography. [Circular 561.] Price 1d.; by post, 1½d.

Teaching of History in Secondary Schools. [Circular 599 and Explanatory Memorandum.] Price 1d.; by post, 1½d.

Teaching of Geometry and Graphic Algebra. [Circular 711.] Price 1d.; by post, 1½d.

Memorandum on Schemes for Employment and Training of Student-Teachers. (Circular 597 for England; or Wales, Circular 15) Price 1d.; by post, 1½d.

General Report on the Instruction and Training of Pupil-Teachers, 1903-7, England, with Historical Introduction. [Cd. 3582.] Price 7s. 8d.; by post, 8s.; Wales [Cd. 3814.] Price 2s.; by post, 2s. 2½d.

Do. do. Historical Introduction, Printed separately as Circular 573. Price 3d.; by post, 4d.

Technology, Evening Schools, & Higher Education in Science & Art.

Regulations for Technical Schools, Schools of Art, and other Forms of Provision of Further Education, 1908-9. [Cd. 4187.] Price 2d.; by post, 3½d.

This publication also contains the Regulations for the Examinations held by the Board in the subjects of Science and Art.

Syllabuses and Lists of Apparatus applicable to Technical Schools, Schools of Art and other forms of provision of further Education, 1908-9. Price 4d.; by post, 8d.

List of Technical Schools, Schools of Art, and other Schools and Classes (Day and Evening) for Further Education in England and Wales, for the School Year ending 31st July, 1907. [List 111.] Price 7d.; by post, 9d.

Prospectus of the Whitworth Scholarships and Exhibitions, giving subjects and conditions of examinations, etc. Price 3d.; by post, 3½d.

Regulations relating to the Victoria and Albert Museum, the Bethnal Green Branch Museum, and the Museum of Practical Geology, Jermyn Street. Price 1½d.; by post, 2½d.

Report for the year 1907 on the Victoria and Albert Museum, the Royal Colleges of Science and of Art, the Geological Survey and Museum, and on the Work of the Solar Physics Committee. [Cd. 4431.] Price 1s. 3d.; by post, 1s. 5½d.

Syllabuses of qualifications required for (1) Art Class Teacher's Certificate, and (2) Art Masters' Certificates; with a list of subjects of Art Instruction. Price 1d.; by post, 1½d.

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BOARD OF EDUCATION.

REGULATIONS

FOR THE

TRAINING OF TEACHERS

OF

DOMESTIC SUBJECTS.

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Presented to Parliament by Command of His Majesty.



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REGULATIONS
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General.

- Report of the Board of Education for 1907-8. [Cd. 4566.] Price 7d.; by post, 8d.
Statistics of Public Education in England and Wales, 1906-7-8.
Part I. Educational Statistics. [Cd. 4288.] Price 2s. 3d.; by post, 2s. 7d.
Part II. Financial Statistics. [Cd. 4506.] Price 9d.; by post, 11d.
Reports from Universities and University Colleges, 1906-7. [Cd. 4440.] Price 1s. 9d.; by post, 2s. 1d.
Special Reports on Educational Subjects—Vols. 1 to 19, 21 and 22.
[A fully detailed list of these Reports may be obtained on application to "The Director of Special Inquiries and Reports, Board of Education, Whitehall, London, S.W." Letters of application so addressed need not be stamped.]
School Doctors in Germany. (Educational Pamphlets, No. 4.) Price 6d.; by post, 7d.
The Problem of Rural Schools and Teachers in North America. (Educational Pamphlets, No. 13.) Price 6d.; by post, 7d.
Table of Holiday Courses on the Continent for Instruction in Modern Languages. Price 2d.; by post, 2d.
Return showing, for each Local Education Authority, the Regulations or Syllabus for Religious Instruction for use of Council Schools. Part I. [H.L. 115; 1906.] Price 1s. 3d.; by post, 1s. 6d. Part II. [H.L. 115—L; 1906.] Price 3s. 6d.; by post, 3s. 11d.
General Introduction to the following Return [H.C. 178; 1906], with Appendix, Tabular Summaries, etc. [H.C. 231; 1907.] Price 2s. 3d.; by post, 2s. 7d.
List of Voluntary Schools in England and Wales on 1st January, 1906, showing Tenure of Premises and Character of Trusts (List 32). [Reprint, with corrections and additions, of H.C. 178, 1906.] Price 11s.; by parcel post, 11s. 9d.
Higher Education, England and Wales. Return showing application of Funds by Local Authorities to Education other than Elementary, during the year 1906-7. [H.C. 381; 1908.] Price 1s. 7d.; by parcel post, 1s. 11d.
Memorandum respecting Petitions for Provisional Orders for Compulsory Purchase of Land (Rules 33). Price 1d.; by post, 1d.
Conventional Signs used in Official Maps, showing Schools, etc. Price 2d.; by post, 2d.
Regulations, Lists, Syllabuses, etc.—Elementary.
Code of Regulations for Public Elementary Schools with Schedules. England (1908) [Cd. 4158.] Price 3d.; by post, 4d. Wales (1908) [Cd. 4170.] Price 3d.; by post, 5d.
List of Public Elementary Schools and Certified Efficient Schools on 31st July, 1908. England [List 21]. Price 2s. 6d.; by post, 2s. 10d.: [List 21 (Wales)]. Price 4d.; by post, 5d.
The Building Regulations. England [Cd. 3571]. Price 2d.; by post, 2d. Wales—Price, 10th.
Regulations applicable to Schools for Blind, Deaf, Defective, and Epileptic Children. [Cd. 4000.] (With modifying minute of 30th June, 1908 [Cd. 4165]). Price 3d.; by post, 4d.
List of Certified Schools for Blind, Deaf, Defective, and Epileptic Children in England and Wales on 31st July, 1908. [Cd. 4372.] Price 2d.; by post, 3d.
Regulations and Conditions respecting Certified Efficient Schools. [Cd. 3994.] Wales [Cd. 3984.] Price 1d.; by post, 1d.
Regulations providing for Special Grants in aid of certain Local Education Authorities in England and Wales in 1908-9. [Cd. 4400.] Price 3d.; by post, 1d.
Revised Regulations of the 21st March, 1901, as to Certificates of Age, Proficiency, and School Attendance. [Cd. 532.] Price 1d.; by post, 1d.
Elementary School Teachers Superannuation Rules, 1899. (Statutory Rules and Orders No. 174.) Price 1d.; by post, 1d.
Annuity Tables. Price 1d.; by post, 1d.
A Pamphlet containing the above Tables and Rules and additional Rules, 1904, 1905 and 1907, the Elementary School Teachers (Superannuation) Act, 1904, together with an explanatory Memorandum (Circular 424) and Circular 563, is at present under revision.
Suggestions for the Consideration of Teachers and others concerned in the work of Public Elementary Schools. [Cd. 2638.] Price 8d.; by post, 10d.
Suggestions on Rural Education, by T. S. Dymond, H.M.I., together with Specimen Courses of Nature Study, Gardening, and Rural Economy. Price 3d.; by post, 4d.
Special Report on the Teaching of Cookery to Public Elementary School Children. [revision.] Price 2d.; by post, 3d.
Syllabus of Physical Exercises for Public Elementary Schools. [At present under revision.] Circular to Local Education Authorities on the Education (Provision of Meals) Act, 1906. [Circular 552.] Price 1d.; by post, 1d.
Memorandum on Medical Inspection of Children in Public Elementary Schools under Section 13 of the Education (Administrative Provisions) Act, 1907. [Circular 576.] Price 2d.; by post, 2d.
Circular on details of Medical Inspection, with specimen schedule for report on Child. [Circular 582.] Price 1d.; by post, 1d.
Circular on Medical Inspection, including functions of School Medical Officer, Local Education Authority's Report, etc. [Circular 596.] Price 1d.; by post, 1d.
Memorandum on the Education (Administrative Provisions) Act, 1907, except Section

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REGULATIONS

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These Regulations supersede those in force from 1st August, 1908.

Copies of any of the forms referred to in these Regulations will be supplied on application, personally, or by letter addressed to The Secretary, Board of Education, Secondary Schools Branch, Whitehall, London, S.W.

Official communications should be written upon foolscap paper and sent in envelopes addressed to The Secretary, Board of Education, Secondary Schools Branch, Whitehall, London, S.W. The postage need not be prepaid, and it is particularly requested that Post Cards and Correspondence Cards may not be used.

Telegraphic Address: "Secondary Education, London."

REGULATIONS FOR SECONDARY SCHOOLS.

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REGULATIONS FOR SECONDARY SCHOOLS, 1909.

Prefatory Memorandum.

1. The following Regulations, while they do not substantially vary from those of last year except with regard to the points to which attention is called in the following paragraphs, have been carefully revised and to some extent rearranged. As was indicated in the Prefatory Memorandum to last year's Regulations, the renumbering of the Articles consequential on the changes of substance then made was deferred for the sake of general convenience. It has now been carried out so as to involve the least change possible in the numbers of the Articles to which reference has most often to be made. The provisions relating to Curriculum of Schools have been brought together into a separate chapter (now Chapter II.) so as to afford a more complete and compact statement of the kind of education which every Secondary School recognised by the Board is required to provide. Some further alterations in the arrangement of the Articles and in their wording have been made in order to define certain rules more clearly, to allow of more elasticity in their working, and to remove a few minor provisions which, being now otherwise dealt with, have become superfluous in the Regulations.

2. The education to be provided by a Secondary School, beginning at an age not exceeding 12, must be carried on through a progressive general course of instruction up to and beyond the age of 16, except where, in rural or thinly populated areas, there is no effective demand for education in ordinary cases beyond the age of 15, and it nevertheless appears educationally advantageous to provide for such education as is required outside of the Elementary School by a State-aided School of a secondary type. The education of the Secondary School may, however, be advantageously begun at an age much below 12, and, in fact, by means of Kindergartens and Preparatory Departments, is often made to cover education from its earliest stages. The transference of pupils from the Elementary to the Secondary School at an earlier age than 12 is encouraged by a Grant paid on such pupils between 10 and 12 years of age, substantially equivalent

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to the Grant paid on pupils in Public Elementary Schools. The main Grant is paid in respect of pupils between 12 and 18 years of age.

3. In the Curriculum for this main portion of the School the fullest liberty is allowed, so far as is consistent with the requirement of a course of education which shall be of a generous and civilising type and neither unduly specialised nor defective in essential elements, for the Authorities of each School to plan out such a course as may be most suitable in view of the previous education and future occupations of the pupils, the special capacities of the staff, and the practical requirements of the area. The Curriculum must meet certain general conditions which are laid down with the object of securing due attention to the cultivation of the mind and body, through book-work, bodily training, and the practical use of the pupil's faculties. It must in all cases make adequate provision for instruction in English Language and Literature, in Geography and History, in Mathematics and Drawing, in Physical Science, including practical work by the pupils, and except in the special case provided for by Article 10, in at least one language other than English. It must also make such provision as the Board, having regard to the circumstances of the School, can accept as adequate for Organised Games, Physical Exercises, Manual Instruction, and Singing; and, as regards girls, must likewise include practical instruction in the elements of Domestic Subjects. For older girls Science may be dropped and Mathematics restricted to Arithmetic in order to make room for a fuller course in these Domestic Subjects. The Board may disallow subjects which are not of educational value, or the time allotted to which is insufficient to admit of effective progress, or interferes with proper instruction in other subjects. Where special circumstances indicate the desirability of greater elasticity, individual pupils or special classes may, with the approval of the Board, follow a Curriculum varying from the Curriculum approved for the rest of the School. It is thus left open to School Authorities to frame Curricula varying widely in scope and content, and to adjust the education given in the School to local circumstances and requirements in each case, subject always to the fulfilment of the general conditions named above. The Board not only permit but encourage such differentiation of type in relation to local needs as is consistent with a broad and solid general

education, and such variation of instruction towards the particular needs and capacities of the pupils as does not interfere with the function of the School as a common organism directed towards the production of trained citizens:

4. The funds at the disposal of the Board have enabled them to provide for a Supplementary Grant to Schools which are taking a substantial share in the work of providing a preliminary education for future Elementary School Teachers, whether as pupils who continue in the School as Bursars or as Pupil-Teachers in a Pupil-Teacher Centre which forms an integral part of the School. The conditions and amount of this Supplementary Grant, which is a further sum of £1 over and above the Grant of £5 provided for in Article 36 (*b*), are set forth in Article 38. It is restricted to those Schools which have offered not less than 25 per cent. of Free Places to pupils from Public Elementary Schools, and in which, during the last two School Years, a certain minimum number and minimum proportion of pupils have satisfactorily completed their periods of recognition as Bursars or Pupil-Teachers. There is also a provision that as regards the School Year 1909-10 previous education in the School will be required in the case of Pupil-Teachers who are to be counted for this purpose. After the year 1909-10 the conditions of the Grant will probably be based upon the average number of Bursars and Pupil-Teachers completing their period of recognition during three consecutive years, and the qualifying period of previous education of a Pupil-Teacher be increased from one year to two. This Grant may be withheld from any School in which the pupils normally enter at an age later than enables them to receive the advantage of the full Secondary School course, or from which future Elementary School Teachers are withdrawn to become Pupil-Teachers elsewhere than in the School. This Grant will also be made under similar conditions for the School Year 1908-9, in addition to the Grants set forth in last year's Regulations. For the purpose of the Supplementary Grant for 1908-9 the numbers taken into account will be those for that year alone, and the condition as to previous education of Pupil-Teachers will not apply.

5. In accordance with the intimation given in last year's Regulations, the granting of fresh waivers ceases on 31st July, 1909, in respect of non-compliance on the

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part of Schools already on the Grant List with one or more of the requirements of Articles 23 and 24 with regard to freedom from denominational restrictions and representation of Public Authorities on the School Governing Body. Such waivers of these Articles, or of Article 18 (b), as have been already given under previous Regulations may be continued at the discretion of the Board, and in any case a waiver allowed in respect of the School Year 1908-9 will be continued for the School Year 1909-10 where no express notice was given that it was limited to the former year.

6. Schools which have been receiving Grant on the lower scale provided for by Article 42 of last year's Regulations will continue to receive it for the School Year 1909-10 if they continue to satisfy the Regulations in other respects. These Schools have also now been made eligible for the special Grant under Article 39, which the Board take power to make towards meeting expense incurred by a School in respect of special educational experiments approved by them.

7. The Rules with regard to provision of Free Places (Article 20 and Appendix) have been recast so as to make their effect clearer, and incorporate points in which experience has shown that former Regulations were insufficiently defined or were not clear in their application. It is now laid down in Article 20 that the Free Places which the School is required to offer must be offered as from the beginning of the School Year. The number of Free Places required is computed at a certain percentage (ordinarily 25) of the total number of entries to the School during the previous School Year, that number being regarded as the normal annual entry. In the case of a new School where the annual entry has not settled down to a normal figure, and likewise in other cases where the number of entries during the previous year has been for any reason either exceptionally large or exceptionally small, the Board will take the circumstances into account and may fix the required number of Free Places accordingly. Many School Authorities have misinterpreted the rule, clearly laid down in previous Regulations, that the percentage of Free Places required is a percentage of entries and not a percentage of the total number of pupils in the School, and the Board therefore desire to call special attention to this fact.

8. Much confusion has also arisen over the precise meaning of a Free Place. This is now more closely

defined in paragraph (1) of the Appendix as being a place in the School without payment of any tuition or entrance fee for the full term of School life, that is to say, so long as the pupil admitted is not either voluntarily withdrawn from the School, or removed from it under rules for removal which apply to fee-paying pupils likewise. It is not meant by this rule that a Free Place once given cannot be withdrawn in any circumstances whatever, but that in order to count as a Free Place the exemption from fees must apply to the whole School life of the pupil, and that holders of Free Places shall be placed on the same footing with regard to the advantages of the education given in the School as ordinary fee-paying pupils. No conditions as to conduct, progress, or attendance may therefore be attached to the tenure of a Free Place which do not apply equally to all the pupils of the School. Failure to reach a reasonable standard of behaviour, diligence, and progress is, in the view of the Board, a valid reason for removing pupils from the School, whether they pay fees or not, and if the removal of fee-paying pupils is required in such circumstances, the same rule is properly applied to holders of Free Places.

9. Towards making up the number of Free Places which a School is required to offer, those pupils are counted who enter the School from Public Elementary Schools as holders of Scholarships covering entrance and tuition fees, if such Scholarships are provided either by the Governing Body out of School funds, by a Local Authority, or by the Governing Body of an Endowed Foundation. But where a Scholarship is provided, or the School fees of a pupil paid, from private sources, *e.g.*, by an individual benefactor, or by a Co-operative Society, such an arrangement falls outside of the scope of the Free Place Rule and the pupil does not count towards the provision of Free Places which the School is required to make. It follows from the definition of a Free Place as covering the whole School life of its holder, that where a scholarship is not tenable, or is not renewable, for a period covering the whole of the School life of its holder, the Governing Body of the School must undertake to continue the education of the pupil in question without payment of a tuition fee after the expiry or non-renewal of the Scholarship for so much longer as the pupil remains at the School. In the event of failure to give this undertaking the Scholarship-holder does not count as the holder of a Free Place.

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10. Further provisions have been laid down in order to secure the effective character of a Free Place. No charge may be made in respect of any entrance test of attainments and proficiency which candidates for Free Places are required to pass; and the School Authorities must take sufficient steps to secure that the offer of Free Places, and the time and conditions of any Examination to be held as an entrance test, shall be known beforehand in all the Public Elementary Schools from which it may reasonably be expected that candidates will present themselves.

11. In the case of a School which is largely or mainly a Boarding School, that fact will be taken into account in fixing the proportion of Free Places which it is required to offer. In any case the admission of boarders without payment of a boarding fee is not required unless the School chooses to admit them rather than offer the number of Free Places required to day scholars; but the remission of tuition fee to a boarder who is at the same time required to pay a boarding fee does not count as the provision of a Free Place.

12. The Regulations with regard to fees and payments have been consolidated and simplified, and it is hoped that this will have a sensible effect in giving larger elasticity to school arrangements while preserving fully the Board's control. In consequence of this simplification the Board's Rules are now comprised in Article 19, and the Appendix deals with fees and payments only as they concern the matter of Free Places. The tuition fee in Schools where fees are charged must cover the whole of the instruction comprised in the approved Curriculum, including the provision of stationery and other apparatus or equipment, except printed books and mathematical instruments. Any other fees charged, including such charges as an entrance fee, a boarding fee, a medical inspection fee, fees for instruction out of school hours or in subjects outside of the School Curriculum, must be approved by the Board as suitable. It will generally be convenient that all such charges should be set forth in a School Prospectus which, after the approval of the Board to the scale of fees has been obtained, may be given to the parents of actual or intending pupils in order that they may be fully informed of the actual cost of having a child or children at the School. This prospectus should be made to include, so far as possible, a complete state-

ment of any supplementary advantages which the School offers, and of the payments to be made by those who wish to avail themselves of them.

13. The Regulations provide (Article 13) that the number of pupils taught together at one time, that is to say, taught as a single class, or by a single teacher, must not as a rule exceed 30, and must in no case exceed 35. Classes of between 30 and 35 will only be allowed as an exceptional arrangement in order to meet special or temporary difficulties of classification. Where any considerable proportion of the classes in a school exceed 30 in number, there must be either insufficient staff or faulty organisation, and the Board will not be able to regard the conditions of Grant as satisfied. For certain purposes, however, such as School singing, *i.e.*, the learning and singing of songs, or military drill, or occasional "mass drill," a larger number of pupils may be taken together, and classes may be combined for lessons which are of the nature of lectures with illustrations, *e.g.*, in Geography. But for ordinary drill or physical exercises, and also for the more important side of instruction in singing, namely, voice-training, ear-training, and sight-reading, the necessary individual attention cannot be given to a class exceeding the ordinary limit, which must therefore be observed in these as in other subjects of instruction.

14. For the sake of administrative convenience, and in order to facilitate the collection of statistical information, the School Accounts must henceforth be made out and a copy furnished to the Board for a uniform financial year ending on 31st March.

15. All grant-earning Schools are required by Article 22 to have an instrument of government approved by the Board. In the case of Endowed Schools, this is either the Scheme, or a body of Regulations made under the Scheme. For Schools provided by a Local Education Authority the Board have drawn up a model form of Articles of Government which embodies all the provisions which the Board require. This form is not prescribed, but may be adopted when desired with such adaptations as may be suitable for the particular School. It will in any case be useful as showing the points on which the Board lay stress. Any alternative form of instrument may be proposed for acceptance which makes satisfactory provision for (a) the composition of the Governing Body; (b) the

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appointment and dismissal of assistant teachers; (c) the powers and responsibilities of the Head Master or Head Mistress; and (d) the relations of the Governing Body to the Local Education Authority in respect of finance. The Governing Body should be so constituted as to ensure that it shall be in full personal touch with the School, that it shall have time and interest for the effective discharge of its duties, and that it shall not be overloaded with other functions. There should be secured to the Head Master or Head Mistress a voice in appointment and dismissal of the assistant staff, and a right to submit proposals to, and be consulted by, the Governing Body.

Robert L. Morant

27th May, 1909.

Regulations for Secondary Schools (in force from 1st August 1909).

1. As from 1st August 1913, Articles 38 and 40 read as follows :—

" 38. An additional Grant of £1 on account of each pupil who was over 15 but not over 18 years of age at the beginning of the School Year and for whom Grant is payable under Article 36 (b) will be paid to all Schools except those which receive Grant under Article 40, provided that they are required to offer, and have in fact offered, 25 per cent. of free places under Article 20."

" 40. Where owing to the smallness of the numbers in a School the Grant payable under the foregoing Articles is less than £300, the Board may, after considering the greater proportional cost required for its efficient maintenance, and its importance towards a due provision of higher education for the area, make up the Grant to £300."

2. Schools which have been receiving Grant under Article 41 or under Article 42 will, where no express notice to the contrary has been given, continue to receive Grant on the same terms for the year 1913-14, if they continue to satisfy the Regulations in other respects.



Regulations for Secondary Schools.

(In force from 1st August, 1909, in England, excluding Wales and Monmouthshire.)

CHAPTER I.

SCOPE AND ORGANISATION.

1. In order to be recognised as a Secondary School within the meaning of these Regulations, a School must offer to each of its pupils a progressive course of general education as defined in Chapter II. below (with the requisite organisation, curriculum, teaching staff, and equipment) of a kind and amount suitable for pupils of an age-range at least as wide as from 12 to 17. Provision made for pupils below the age of 12 must be similarly suitable, and in proper relation to the work done in the main portion of the School.

2. (a) A School will not be recognised as a Secondary School unless (i) an adequate proportion of the pupils remain at least four years in the School, and (ii) an adequate proportion of the pupils remain in the School up to and beyond the age of 16. In determining what is an adequate proportion of pupils for either of these purposes, the Board may (where circumstances justify it) take into account pupils who have left the School and are pursuing their studies in some other Secondary School approved for this purpose.

(b) Three years may be substituted for four years, and the age of 15 for the age of 16, in applying this Article to Schools in rural areas and small towns, when this appears to the Board advantageous in view of local circumstances.

3. Where the same School comprises more than one department, the Board have power to decide whether a department is, or is not, a separate School for the purpose of these Regulations.

4. The School must meet regularly during not less than 36 weeks in the course of the School Year, the School hours and the arrangements as to vacations being approved by the Board as satisfactory. Cases of closure under order of a medical or sanitary authority, or for other unavoidable cause, must be notified to the Board, and will be taken into account for the purpose of this Article.

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5. (a) No catechism or formulary distinctive of any particular religious denomination may be taught in the School except as provided by this Article.

(b) If the instrument under which the School is governed requires, or does not prohibit, the giving in the School of religious instruction distinctive of any particular denomination, the Governing Body may provide such instruction for any pupil upon the written request of the parent or guardian of the pupil. A record must be kept of all such requests.

(c) In a School where such instruction is given, regulations must be made by the Governing Body such as will secure observance of provisions (a), (b), and (c) of this Article to the satisfaction of the Board, and a copy of such regulations must be given to the parent or guardian of every pupil.

(d) Such instruction, if given, must be provided from funds other than grants made by the Board of Education or any Local Authority.

CHAPTER II.

CURRICULUM.

6. The curriculum (with time-analysis) of the whole School must be approved by the Board, and must provide for due continuity of instruction in each of the subjects taken, and for an adequate amount of time being given to each of these subjects. The Board may require modifications in the curriculum or the time-table if a subject is taught which is not of educational value, or if the time spent on particular subjects interferes with proper instruction in other subjects, or if the time given to any subject is insufficient to allow of effective progress being made in it, or for other similar reasons.

7. The curriculum must provide instruction in the English Language and Literature, at least one Language other than English, Geography, History, Mathematics, Science, and Drawing. A curriculum including two Languages other than English, but making no provision for instruction in Latin, will only be approved where the Board are satisfied that the omission of Latin is for the educational advantage of the School. The instruction in Science must include practical work by the pupils.

8. The curriculum must make such provision as the Board, having regard to the circumstances of the School,

can accept as adequate for organised games, physical exercises, manual instruction, and singing.

9. In Schools for girls the curriculum must include provision for practical instruction in domestic subjects, such as Needlework, Cookery, Laundry Work, House-keeping and Household Hygiene; and an approved course in a combination of these subjects may for girls over 15 years of age be substituted partially or wholly for Science and for Mathematics other than Arithmetic.

10. By special permission of the Board, Languages other than English may be omitted from the curriculum, provided that the Board are satisfied that the instruction in English provides special and adequate linguistic and literary training, and that the teaching staff are qualified to give such instruction.

11. Individual pupils or special classes may, with the approval of the Board, follow a curriculum varying from the curriculum approved for the rest of the School.

CHAPTER III.

TEACHING STAFF.

12. The teaching staff must be sufficient in number and qualification for providing adequate instruction in each subject of the approved curriculum.

13. The number of pupils taught together at one time must not as a rule exceed 30, and must never exceed 35.

14. The teaching staff may not undertake any other duties which, in the opinion of the Governing Body or of the Board, would interfere with the efficient discharge of their duties in the School.

15. The salaries of the teaching staff must in no case be subject to variation according to the amount of Grant received.

16. Where the Board think fit, they may, on consideration of the teaching staff as a whole, require that a certain proportion of all new appointments shall consist of persons who have gone through a course of training recognised by the Board for the purpose.

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CHAPTER IV.

ADMISSION, FEES, AND RECORDS.

17. No pupil may be refused admission to the School except on reasonable grounds. Any question or dispute arising under this provision shall, if necessary, be determined by the Board.

18. (a) No pupil shall be required, as a condition of being admitted into or remaining in the School as a day scholar, to attend or abstain from attending any Sunday School, place of religious worship, religious observance, or instruction in religious subjects in the School or elsewhere; and the times for religious worship or for any lesson on a religious subject shall be conveniently arranged for the purpose of allowing the withdrawal of any pupil therefrom.

(b) This provision shall also apply to boarders as well as day scholars. But in a School governed by a Scheme made under the Endowed Schools Acts or the Charitable Trusts Acts this Regulation shall be regarded as met (i) by compliance with the Scheme where it includes the provisions prescribed by Section 16 of the Endowed Schools Act, 1869, or (ii) by compliance with regulations made by the Governing Body in accordance with the provisions of that Section where the Scheme does not include those provisions.

19. The School may be with or without fees, but any fees must be approved by the Board as suitable. The tuition fee, if any, must cover all subjects of instruction included in the approved curriculum, and the use of all educational equipment (including stationery) necessary for those subjects except, if the Governing Body think fit, printed books and Mathematical instruments. It must, except with the special consent of the Board, be on a scale uniformly applicable to all pupils, and not subject to increase at an age beyond 12; but different rates of fee may be approved for pupils residing within and without a given area, and for two or more pupils who are members of the same family.

20. In all fee-charging Schools, free places must be offered at the beginning of each School Year to pupils entering from Public Elementary Schools under the

conditions laid down in the Appendix to these Regulations. The number to be offered will ordinarily be 25 per cent. of the total number of pupils admitted to the School during the previous year, or, in the case of a new School, at its opening, but this percentage may be reduced or varied by the Board on sufficient grounds in the case of any particular School.

21. Records with regard to all pupils admitted must be kept in the Registers supplied by the Board, and in accordance with the rules furnished therewith.

CHAPTER V.

MANAGEMENT.

22. The School must be conducted by a Governing Body acting under and in accordance with a scheme or minute or body of written regulations which states its constitution and defines its functions both as regards responsibility for general control and as regards immediate responsibility (including that of the Head Master or Head Mistress) for the conduct of the School, and which is approved by the Board. A copy of the scheme or minute or body of regulations as approved must be deposited with the Board, and its provisions must not be varied or departed from without the approval of the Board.

23. The instrument under which the School is governed (whether in the form of a Trust Deed, Scheme, Charter, Act of Parliament, Statutes, Regulations, or Minutes):—

- (a) must not require any members of the teaching staff to belong, or not to belong, to any particular denomination ;
- (b) must not require a majority of the Governing Body (whether in virtue of their tenure of any other office or otherwise) to belong, or not to belong, to any particular religious denomination ;
- (c) must not provide for the appointment of a majority of the Governing Body by any person or persons who, or by any body the majority of whom, are required (whether in virtue of their tenure of any other office or otherwise) to belong, or not to belong, to any particular religious denomination.

24. The Governing Body of the School, where it is not a Local Education Authority or a Committee of a Local Education Authority, must contain a majority of representative Governors; provided that if any authority or constituency abstains from exercising or fails to exercise any power of appointment or election exercisable by it, and by reason only of such abstention or failure the Governing Body does not contain a majority of representative Governors, the School may nevertheless be regarded as complying with this Regulation.

In this Article—

- (i) "Representative Governor" means (a) a member appointed on the Governing Body by a Local Authority or by a popular constituency, and (b) any person who is a member of the Governing Body by virtue of his office as a Member of Parliament, Mayor, Chairman, Vice-Chairman, or member of any Local Authority, or as Chairman or Vice-Chairman of a popular constituency.
- (ii) "Local Authority" includes the Council of any County, Borough, Urban or Rural District or Parish, any Committee constituted under Section 17 of the Education Act, 1902, and any Board of Guardians.
- (iii) "Popular constituency" includes any Parish Meeting or Vestry, and the ratepayers of any Parish.

25. A meeting of the Governing Body, of which sufficient notice will be given, must be held, if required, when the School is inspected, and the accounts and any other papers necessary for inquiry into the control and conduct of the School must be produced when required by the Board or by an Inspector of the Board.

26. The Governing Body must appoint a person to act as Correspondent for the School with the Board.

CHAPTER VI.

GENERAL CONDITIONS OF RECOGNITION FOR GRANTS.

27. Application to the Board for placing a School on the list of Secondary Schools recognised for Grants, on a form of Preliminary Statement which will be supplied by

the Board, must be made by the Governing Body or by the Local Education Authority providing the School, and should be made not less than a month before the beginning of the School Year.

The School Year will begin on 1st August and end on 31st July. In special circumstances a School applying for recognition may be recognised for a shortened initial year from 1st January to 31st July.

28. The Board before granting the application will have regard to the suitability of the education provided by the School in view of the circumstances of the locality, and to the relation of the School to other Schools and places of education available for the area; and where the School is not provided by a Local Education Authority, will consult the Local Education Authority. Recognition may be withdrawn at any time by the Board.

29. The School must be efficient; must not compete unduly with a neighbouring School; must be eligible from its character, financial position, and scale of fees, if any, to receive aid from public funds, and must be open at all times to inspection by the Board.

30. The School must not be conducted for private profit or farmed out to the Head Master or Head Mistress.

31. The School premises must be sanitary, convenient for teaching purposes, adapted to the circumstances of the School, and provided with adequate equipment and appliances for the curriculum approved in accordance with Chapter II. of these Regulations. The plans of both site and buildings for new Schools, or for enlargement of existing Schools, must be submitted to the Board for approval.

32. All returns called for by the Board must be made, and a full account of the income and expenditure of the School must be furnished annually in such form as the Board may require. On and after 31st March, 1910, all accounts must be made up to 31st March in each year.

33. A School is not placed on the Grant List unless it has at least 20 pupils over 12 years of age.

34. The time-table of every School on the Grant List must be forwarded each year to the Inspector on the form supplied for that purpose, at the beginning of the School Year, or at such times as the Board may prescribe. Deviations from it should not be made, except in a case of

special emergency, without previous notice to the Inspector. Occasional holidays should be notified to the Inspector beforehand. Permanent alterations which it is desired to make in the approved curriculum must be submitted to the Board for approval; but an approved curriculum need not be re-submitted so long as no substantial alteration in it is desired by the Governing Body or required by the Board.

35. The Board may at any time require that such portion of the School as they may think fit shall be submitted for examination to an Examining Body approved by them for the purpose. Pupils under 15 years of age may not, except with the express permission of the Board, be presented for any other external examination except one comprising the whole school, or held solely for the award of scholarships or exhibitions, or held in accordance with a Scheme made under the Endowed Schools Acts or the Charitable Trusts Acts.

CHAPTER VII.

GRANTS.

36. In the case of Schools placed on the Grant List and complying with these Regulations, Grants will be payable on account of pupils receiving instruction in accordance with an approved curriculum as follows:—

- (a) A Grant of £2 on account of each pupil who was over 10 but not over 12 years of age at the beginning of the School Year and who had been for at least two years under instruction in a Public Elementary School immediately before entering the Secondary School. Pupils transferred from a School in which they were eligible for this Grant will continue to be eligible for it in the School to which they are transferred.
- (b) A Grant of £5 on account of each pupil who was over 12 but not over 18 years of age at the beginning of the School Year.

37. For the purpose of estimating each of the above Grants, the number of registered pupils fulfilling the conditions named on 1st October, 1st February, and 1st June in each School Year will be taken, and one-third of the sum of these numbers will be the number

on which Grant is payable. In the case of the shortened School Year provided for by Article 27, the number on which Grant is payable will be one-third of the sum of the numbers on 1st February and 1st June. Any pupils who are reported by the Inspector as unfit to attend the classes in which they are being taught, or as unsatisfactory in attendance (except from absence owing to certified illness or risk of infection), may be disqualified for Grant.

38. (a) The Board may pay an additional Grant at the rate of £1 on account of each pupil for whom Grant is payable under Article 36 (b) in a School which

- (i) provides for the preliminary education of Elementary School Teachers as Bursars or in a Pupil-Teacher Centre forming an integral part of the School; and
- (ii) has offered not less than 25 per cent. of Free Places under Article 20.

(b) The additional Grant may be withheld from a School to which an undue proportion of pupils are admitted at an age too late to enable them to derive full benefit from the School Course, or from which pupils are withdrawn to become Pupil-Teachers elsewhere.

(c) Subject to the above provisions, the additional Grant will be payable for 1909-10 to those Schools in which the average number of Bursars and Pupil-Teachers completing their periods of recognition during the School Years 1908-9 and 1909-10 amounts to (i) not less than 5, and (ii) not less than 5 per cent. of the average number of pupils for whom Grant under Article 36 (b) is payable during those years. But only those Bursars and Pupil-Teachers will be counted for this purpose in respect of whom the conditions of Grant under the Regulations for the Preliminary Education of Elementary School Teachers to be satisfied during the period of recognition have been satisfied. No Pupil-Teacher beginning a period of recognition on or after the 1st of August, 1909, will be counted for the purpose who has not had at least a year's previous education in the School.

38.* The Grant set forth in Article 38 will also be paid, in addition to the Grants provided for in the Regulations of 1908, to Schools fulfilling the same conditions during 1908-9, except that the numbers taken

into account will be those for that year alone, and not the average numbers for two years.

39. The Board may in certain cases augment the Grant payable to a School by a further payment to such amount as they think fit towards meeting expense incurred by the School in respect of special educational experiments approved by the Board.

40. Where owing to the smallness of the numbers in a School the Grant payable under the foregoing Articles is less than £250, the Board may, after considering the greater proportional cost required for its efficient maintenance, and its importance towards a due provision of higher education for the area, make up the Grant to £250.

41. In the case of a School in which compliance with one or more of the conditions set out in Articles 18 (b), 23 and 24 was waived by the Board for the School Year 1908-9, the Board may if they see fit continue this waiver for the School Year 1909-10, and pay Grants under Articles 36 to 40.

42. A School on the Grant list which received Grants for the School Year 1908-9 under the provisions of Article 42 of the Regulations of 1908 will, if it satisfies the Regulations in other respects, continue to receive Grants on the same scale for the School Year 1909-10 notwithstanding that it continues to fail to fulfil the conditions in respect of failure to fulfil which it was not then eligible for full Grant, and will also be eligible for Grant under Article 39. Schools receiving Grant under this Article are not eligible for Grant under Article 38 or Article 40.

43. Any grant payable to a School which has closed, or has ceased to be conducted in accordance with the conditions for Grants under these Regulations, may be withheld wholly or in part, and in any case the payment made will not exceed the net outstanding liabilities of the School for maintenance at the end of the School Year in respect of which the Grant is paid.

44. An instalment of Grant amounting ordinarily to one half of the Grant estimated to be payable for the School Year is payable shortly after 1st April on a certificate from the Governing Body, and from the Inspector,

that the School is being satisfactorily conducted in accordance with these Regulations.

No instalment of Grant is payable in respect of the shortened initial year mentioned in Article 27.

45. If any School on the Grant list has failed to fulfil any of the conditions of Grant in these Regulations, the Board have power either to withhold the Grant or, if they think fit, to pay it with or without deductions; and if any question arises as to the interpretation of these Regulations or as to the fulfilment of any of the conditions of Grant, the decision of the Board shall be final.

CHAPTER VIII.

LIST OF EFFICIENT SECONDARY SCHOOLS.

46. The Board have established a List, which is published annually, of Secondary Schools recognised by them as efficient. The Governing Body or persons responsible for the management of any Secondary School (as defined in Articles 1 and 2 of these Regulations) not eligible, or not applying, for Grants under these Regulations may apply to the Board for the School to be placed on this list.

47. The Board will determine the efficiency of the School by inspection, and must be satisfied that the School has an adequate staff, provides a suitable curriculum and efficient instruction and possesses adequate premises and equipment. The inspection will be an inspection of both premises and instruction. The former will include sanitary arrangements, provision for recreation and arrangements for the boarding of teachers and pupils. The latter will deal with all the subjects comprised in the curriculum of the School. The inspection will be without charge.

48. The Report of the Inspectors on the efficiency of the School at the time of inspection will be sent to the Head Master or Head Mistress of the School, to the persons responsible for its management if other than the Head Master or Head Mistress, and also, if the Board think fit, to the Local Education Authority, but not for publication by the Authority without consent of the body or persons responsible for conducting the School. The Report, if published, must be published in its entirety.

49. A School thus placed on the list of efficient Secondary Schools may be removed from the list at any time at the discretion of the Board, and its continuance on the list will depend on the results of such further inspections as the Board may from time to time hold. So long as the School is on the list it must be open at all reasonable times to inspection by the Board, and must make such returns to the Board as the Board may from time to time require.

50. The List of efficient Secondary Schools also includes Schools on the Grant List, and Schools inspected by the Board in the exercise of their jurisdiction under the Charitable Trusts Acts, and found to be efficient within the meaning of Article 47.

These Regulations will come into force in England, with the exception of Wales, the County of Monmouth, and the County Borough of Newport, on 1st August, 1909.

ROBERT L. MORANT.

27th May, 1909.

APPENDIX.

RULES WITH REGARD TO FREE PLACES.

1. In Article 20 of these Regulations a free place means a place in the School without payment of any tuition or entrance fee for the full term of School life, that is to say, so long as the pupil admitted is not either voluntarily withdrawn from the School or removed from it under rules for removal which apply to fee-paying pupils likewise.

2. The Governing Body may provide a free place either (a) by remission of fee; or (b) by admission of a pupil holding a Scholarship covering the fee, provided that the Governing Body undertake to remit the fee in respect of any part of the School life not covered by the Scholarship.

Only those Scholarship-holders will be reckoned towards the required provision of free places whose Scholarships are awarded by the Governing Body of the School and out of the funds of the School, or by a Local Authority, or by the Governing Body of an Endowed Foundation.

3. Pupils entering from Public Elementary Schools mean boys and girls who have been under instruction for at least two years in a Public Elementary School immediately before entering the Secondary School. Pupils transferred to the School from another Secondary School in which they have already held free places under Article 20 may, with the approval of the Board, be counted towards the required proportion, but boys or girls already in the School as fee-paying pupils may not be so counted if their fees are subsequently remitted or if they are subsequently awarded Scholarships covering the fee, nor may pupils be so counted who enter the School as Pupil-Teachers.

4. The free places offered, or a proportion of them, may be subject in the first instance to such restrictions local or otherwise as may be approved by the Board, provided that any places not so filled up are then open to all qualified candidates without restriction.

5. Boys or girls applying for admission under Article 20 may be required to pass an entrance test of attainments

and proficiency such as can be approved by the Board for the School in question, having due regard to (1) the age of the applicants, (2) the subjects in which they have been receiving instruction, (3) the standard of attainments and proficiency required for admission of fee-paying pupils.

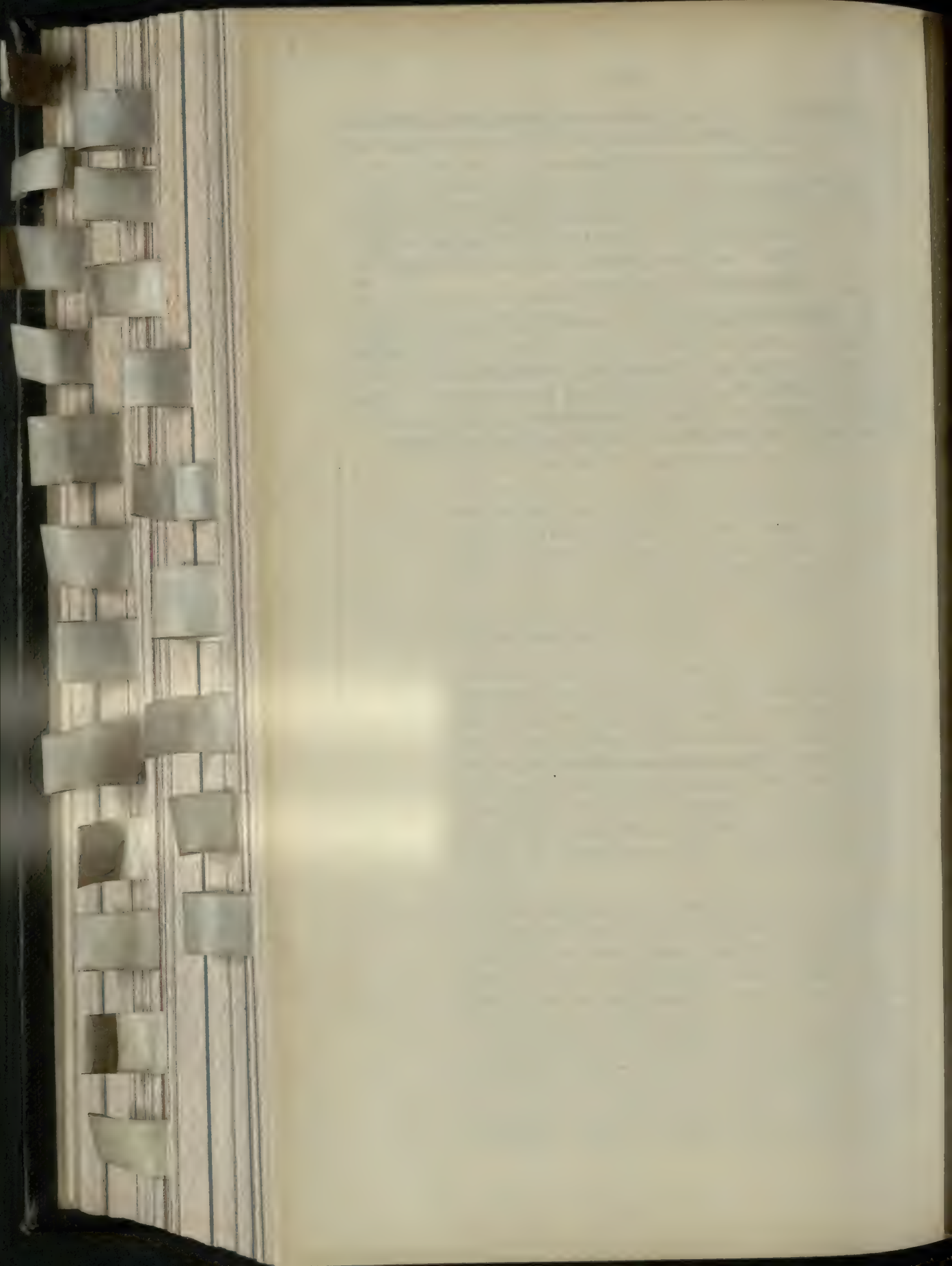
No charge may be made in respect of any such entrance test.

6. In any examination held as an entrance test of candidates for free places the following rules are to be observed :—

- (a) The Governing Body of the School will be responsible for the conduct of the Examination; but it is desirable that some person who has had teaching experience in a Public Elementary School should be associated with the Head Master and Staff of the Secondary School in conducting it, and that the Examiners should receive and consider a report on each candidate from the Head Master or Head Mistress of the Elementary School from which he or she comes.
- (b) Candidates under 10 or above 13 years of age need not be accepted.
- (c) Candidates between 10 and 13 must only be required to qualify in English and Arithmetic, in which subjects they should be required to reach the standard of the class in the Secondary School in which the average age is nearest their own, but in order to test the relative merits of the candidates further questions may be set in any of the subjects specified in Article 2 of the Code of Regulations for Public Elementary Schools.
- (d) Candidates should as a rule be under 12, and the free places offered may be restricted in the first instance to candidates between 10 and 12, provided that any places not so filled up are then open to all qualified candidates between 12 and 13. Candidates over 13, if accepted, may properly be subjected to a severer test in respect of both subjects and standard within the limits of Article 2 of the Code, in order to prove their fitness to take a place in the Secondary School corresponding to their age.

- (e) Where there are more duly qualified candidates than places the award shall be determined by competition among them.
- (f) The examination may be partly oral. The record of marks and all written papers must be preserved by the Governing Body for six months after the Examination, and must be open to inspection by the Board.

7. The Governing Body of the School must secure by published notice or otherwise that the offer of free places, and the time and conditions of any examination to be held as an entrance test, shall be known beforehand in all the Public Elementary Schools from which it may reasonably be expected that pupils will desire to enter the School.



to inclusion of Mensuration for certain Standards in syllabus of Examination for Certificates of Proficiency. (Schedule III. of Code.) [Circular 598.] Price 1d.; by post, 1½d.

Circular 709. Local Education Authorities relating to the revision of the Regulations affecting the Staffing of Public Elementary Schools, and the size of Classes. [Circular 709.] Price 1d.; by post, 1½d.

Report on the Educational Work in Poor Law Schools, etc. Price 6d.; by post, 7d.

Report by Mr. Hamilton on Public Inquiry at Swansea. [Cd. 4542.] Price 2d.; by post, 3d.

Training of Teachers.

How to become a Teacher in a Public Elementary School, 1908. Price 4d.; by post, 5d.

Regulations for the Training of Teachers for Elementary Schools, from 1st August, 1908. [Cd. 4169.] Price 7d.; by post, 9d.

Regulations for the Training of Teachers of Domestic Subjects, 1909. [Cd. 4603.] Price 1d.; by post, 2d.

Regulations for the Training of Teachers for Secondary Schools. [Cd. 4184.] Price 1d.; by post, 1½d.

Examinations in Papers set at the Preliminary Examination for the Elementary School Teachers' Certificate, 1908. Price 6d.; by post, 7d.

Examinations in Papers set at the Certificate Examination, 1908. Price 6d.; by post, 7d.

List of Persons who have passed the Preliminary Examination for the Elementary School Teachers' Certificate, 1908. [List 30, Part I., 1908.] Price 6d.; by parcel post, 10d.

Statistics of the Preliminary Examination for the Elementary School Teachers' Certificate, 1907. [List 30, Part II., 1907.] Price 6d.; by post, 7½d.

List of Training College Students who completed their periods of training on 31st July, 1908 and are qualified by examination for recognition as Certificated Teachers. [List 19, 1908.] Price 6d.; by post, 8½d.

Supplementary List of Training College Students who completed their periods of Training on 31st July, 1907, and have since qualified by examination for recognition as Certificated Teachers. [Supplementary List 19, 1907.] Price 1d.; by post, 1½d.

List of Persons who have passed the Certificate Examination of the Board of Education for Teachers in Elementary Schools, 1908. [List 24—Part I., 1908.] Price 6d.; by post, 7d.

Statistics of the Certificate Examination, 1907. [List 24—Part II., 1907.] Price 6d.; by post, 7d.

Secondary Schools and Pupil-Teacher Centres.

Regulations for Secondary Schools, from 1st August, 1908. England [Cd. 4037]; Wales [Cd. 444.] Price 2d.; by post, 2½d.

Regulations for the Preliminary Education of Elementary School Teachers, 1909. England [Cd. 4628.] Price 3d.; by post, 4d. Wales [Cd. 4656.] Price 3d.; by post, 4d.

List of Efficient Secondary Schools and recognised Pupil-Teacher Centres (England), 1907. [Cd. 4374.] Price 8d.; by post, 10½d.

Building Regulations for Secondary Schools and Pupil-Teacher Centres. [Cd. 3865.] Price 2d.; by post, 2½d.

Music in Secondary Schools. Form 125 S. (G.) Price 1d.; by post, 1½d.

Manual Instruction in Secondary Schools. [Circular 547.] Price 1d.; by post, 1½d.

Pronunciation of Latin. [Circular 707.] Price 1d.; by post, 1½d.

Teaching of Latin in Secondary Schools. [Circular 574, for England; or Wales, Circular 1.] Price 1d.; by post, 1½d.

Teaching of Geography. [Circular 561.] Price 1d.; by post, 1½d.

Teaching of History in Secondary Schools. [Circular 599 and explanatory Memorandum.] Price 1d.; by post, 1½d.

Teaching of Geometry and Graphic Algebra. [Circular 711.] Price 1d.; by post, 1½d.

Memorandum on Language Teaching in State-Aided Secondary Schools in England. [Circular 705.] Price 1d.; by post, 1½d.

Memorandum on Schemes for employment and Training of Student-Teachers. (Circular 597 for England; or Wales, Circular 15) Price 1d.; by post, 1½d.

General Report on the Instruction and Training of Pupil-Teachers, 1903-7. England, with Historical Introduction. [Cd. 3582.] Price 7s. 8d.; by post, 8s.; Wales [Cd. 314.] Price 2s.; by post, 2s. 2d.

Historical Introduction to preceding, printed separately as Circular 573. Price 3d.; by post, 4d.

Technology, Evening Schools, and Higher Education in Science and Art.

Regulations for Technical Schools, Schools of Art and other Forms of Provision of Further Education, 1908-9. [Cd. 4187.] Price 2d.; by post, 3½d.

This publication also contains the Regulations for the Examinations held by the Board in the subjects of Science and Art.

Syllabuses and Lists of Apparatus applicable to Technical Schools, Schools of Art and other forms of provision of Further Education, 1908-9. Price 4d.; by post, 8d.

List of Technical Schools, Schools of Art, and other Schools and Classes (Day and Evening) for Further Education in England and Wales, for the School Year ending 31st July 1907. [List 111.] Price 7d.; by post, 9d.

Prospectus of the Whitworth Scholarships and Exhibitions, giving subjects and conditions of examinations, etc. Price 3d.; by post, 3½d.

Regulations relating to the Victoria and Albert Museum, the Bethnal Green Branch Museum, and the Museum of Practical Geology, Jermyn Street. Price 1½d.; by post, 2½d.

Report for the year 1907 on the Victoria and Albert Museum, the Royal Colleges of Science and of Art, the Geological Survey and Museum, and on the Work of the Solar Physics Committee. [Cd. 4431.] Price 1s. 3d.; by post, 1s. 5½d.

PREL. ED.

BOARD OF EDUCATION.

REGULATIONS
FOR
SECONDARY SCHOOLS.

(IN FORCE FROM 1ST AUGUST 1909,
IN ENGLAND, EXCLUDING WALES AND MONMOUTHSHIRE.)

Presented to both Houses of Parliament by Command of His Majesty.



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REGULATIONS FOR THE PRELIMINARY EDUCATION OF ELEMENTARY SCHOOL TEACHERS.

- (1.) Pupil-Teacher Regulations.
- (2.) Bursary Regulations.
- (3.) Student-Teacher Regulations.

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 Part II. Financial Statistics, 1910-11-12. [Cd. 6551.] Price 1s. 4d.; by post, 1s. 8d.
 Directory showing Elementary and Secondary Schools, &c., in Wales. Price 6d.; by post, 7½d.
 Special Reports on Educational Subjects—Vols. 2, 4, 5, 7 to 27.
 [A fully detailed list of these Reports may be obtained on application to "The Director of Special Inquiries and Reports, Board of Education, Whitehall, London, S.W." Letters of application so addressed need not be stamped.]
 Holiday Courses on Continent for Instruction in Mod. Languages. Price 2d.; by post, 2½d.
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 Memorandum on the Principles and Methods of Rural Education. Price 3d.; by post, 4d.
 Report of Departmental Committee on Endowments, 1911. Vol. I.—Report. [Cd. 5362.] Price 5d.; by post, 6½d. Vol. II.—Evidence, Appendices, &c. [Cd. 5747.] Price 2s. 3d.; by post, 2s. 7d.

Medical.

- Report for 1911 of Chief Medical Officer. [Cd. 6530.] Price 1s. 5d.; by post, 1s. 9d.
 Regulations; Grants for Medical Treatment, 1912-13. [Cd. 6138.] Price ½d.; by post, 1d.
 Circular respecting preceding (Circular 792). Price 1d.; by post, 1½d.
 Circular on Education (Provision of Meals) Act, 1906. [Circular 552.] Price 1d.; by post, 1½d.
 Memorandum on Medical Inspection of Children in Public Elementary Schools. [Circular 576.] Price 2d.; by post, 2½d.
 Circular on details of Medical Inspection, with specimen schedule for report on Child. [Circular 582.] Price 1d.; by post, 1½d.
 Circular on Medical Inspection, including functions of School Medical Officer, Local Education Authority's Report, &c. [Circular 596.] Price 1d.; by post, 1½d.
 Syllabus of Physical Exercises for Schools. Price 9d.; by post, 1s.

Elementary.

- Code of Regulations for Public Elementary Schools with Schedules. England (1912) [Cd. 6262.] Price 3d.; by post, 4d. Wales (1912) [Cd. 6289.] Price 3d.; by post, 4d.
 Minute of 4th July 1912, modifying the above. [Cd. 6891-4.] Price ½d.; by post, 1d.
 List of Public Elementary Schools, &c., in England. [List 21.] Price 2s. 6d.; by post, 3s. 11d.
 Building Regulations. England [Cd. 3571.] Price 2d.; by post, 2½d.; Wales—Price ditto.
 Report and Abstract of Evidence: Departmental Committee on Cost of School Buildings, 1911. [Cd. 5534.] Price 6d.; by post, 8d.
 Report of Committee on Playgrounds, 1912. [Cd. 6463.] Price 8½d.; by post, 11d.
 Regulations applicable to Schools for Blind, Deaf, Defective, and Epileptic Children. [Cd. 4793.] Price 2½d.; by post, 3½d.
 Modifying Minute of 27th June 1910. [Cd. 5232.] Price ½d.; by post, 1d.
 List of Certified Schools for Blind, Deaf, Defective, and Epileptic Children in England and Wales on 31st July 1912 (List 42). [Cd. 6570.] Price 2½d.; by post, 3½d.
 Regulations and Conditions respecting Certified Efficient Schools. [Cd. 3944.] Wales [Cd. 3984.] Price of either, 1d.; by post, 1½d.
 Regulations providing for Special Grants in aid of certain Local Education Authorities in England and Wales in 1912-13. [Cd. 6224.] Price ½d.; by post, 1d.
 Abstract of School Attendance Bye-Laws, 1910. Price 6d.; by post, 6½d.
 Revised Regulations of the 21st March 1901, as to Certificates of Age, Proficiency, and School Attendance (Statutory Rules and Orders, 1901, No. 308). Price 1d.; by post, 1½d.
 Elementary School Teachers Superannuation Acts, 1898 and 1912, Rules of 1899, 1904, 1905, 1907, 1909, and 1911, Annuity Tables, explanatory Memorandum and Circular 563, in one pamphlet. Price 3d.; by post, 4d.
 Suggestions for the Consideration of Teachers and others concerned in the work of Public Elementary Schools. Price 6d.; by post, 8d.
 Revised Edition—Instalment No. 1, Teaching of Needlework [Circular 730]; Instalment No. 2, Teaching of Gardening [Circular 746]. Price 1d. each; by post, 1½d.; Instalment No. 3, Teaching of Arithmetic [Circular 807]. Price 2d.; by post, 2½d.; Instalment No. 4, Teaching of English [Circular 808]. Price 2d.; by post, 3d.; Instalment No. 5, Winter-Work for School Gardening Classes [Circular 819]. Price 1d.; by post, 1½d.
 Syllabus of Lessons on "Temperance" for Children attending Public Elementary Schools [Also Welsh translation.] Price of either, 2d.; by post, 2½d.
 Manual Instruction in Elementary Schools. Price 3d.; by post, 4d.
 Circular on Infant Care and Management [Circular 758]. Price 2d.; by post, 2½d.
 Circular on Risk of Fire in Schools: external doors. [Circular 587 for England; or Wales, Circular 10.] Price 1d.; by post, 1½d.
 General Report on the Teaching of Domestic Subjects, 1912. Price 2d.; by post, 3d.
 Report on Teaching of Needlework, 1912. Price 1d.; by post, 1½d.
 Reports on Elementary Schools, 1852-1882, by Matthew Arnold. Price 1s.; by post, 1s. 4d.

BOARD OF EDUCATION.

REGULATIONS FOR THE PRELIMINARY EDUCATION OF ELEMENTARY SCHOOL TEACHERS.

- (1) Pupil-Teacher Regulations,
- (2) Bursary Regulations,
- (3) Student-Teacher Regulations.

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R. SYLLS.

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Note.—Previous issues of these Regulations included *Appendices*, which are now represented by *separate pamphlets*, viz. :—

A.—List of Examinations qualifying for Admission to a Training College, as set out in the Regulations for the Training of Teachers for Elementary Schools. This list may be referred to as List 176.

B.—Syllabus of the Preliminary Examination for the Elementary School Teachers' Certificate. This Syllabus may be referred to as Syllabus 1.

The List of Examinations and the Syllabus are liable to alteration from time to time, and it was thought better for this reason not to retain them in the Regulations. The current List of Examinations, and also the Syllabus for the year 1914 and for subsequent years as issued, will be obtainable on application to :—The Secretary, Board of Education, Whitehall, London, S.W., or in the same way as these Regulations (*see cover*), price 1*d.* each.

Regulations for the Preliminary Education of Elementary School Teachers, 1913.

PREFATORY MEMORANDUM.

1. The principal changes made in these Regulations have already been announced in the Appendix to Circular 821, and an explanation of them is given in the circular itself, which is reprinted for reference immediately after this Prefatory Memorandum. There are, however, certain other changes of substance which call for some comment.

2. *Article 7 (a)* is designed to give more freedom in the arrangement of the attendance of Pupil-Teachers for employment and training at the Elementary School. It is left to the Local Education Authorities to submit a plan for their employment and training. Where the Pupil-Teacher is recognised for a period of four years, it will, as a rule, be desirable that during the first year of his recognition he should pursue his general education without interruption by any requirement of employment or training. It is no longer prescribed that in any particular year any specified number of meetings, or indeed any meetings at all, shall be attended for employment or training. All that is necessary is that during the whole period of recognition (apart from the first year of a four-year recognition) the minimum number of meetings fixed shall be attended, and the maximum shall not be exceeded. The Board, after approving a plan of attendance, will accept for the purposes of grant a certificate that the plan has been carried out, reserving, however, the usual right of inquiry should need arise.

3. An addition has been made to *Articles 31 (f)* and *33 (c) (i)*, so as to allow a candidate for Bursarship or a Bursar to be submitted to a short test in teaching in a Public Elementary School. As at present advised, the Board do not consider that this period can be

allowed to extend beyond a month without causing serious interruption to the Pupil's course.

4. *Article 36.*—Hitherto, it has been a condition of the recognition of all Student-Teachers that they should have passed, both as a whole and in every subject required, an examination accepted by the Board as a qualification for admission to a Training College. The main purpose of this provision was to ensure that the Student-Teacher should be free to devote his best energies to his training in teaching in an Elementary School and to continuing his general education untrammelled by the distractions of preparing for an Examination. The Board are satisfied that this condition is valuable, so far as Examinations of any wide scope are concerned. There is, however, some reason to think that the entry for an Examination in one or two single subjects will in some cases not be inconsistent with the proper aims of Student-Teacher-ship. The Board have accordingly decided to take power to recognise as Student-Teachers on certain conditions, candidates who have not fully completed their qualifying Examination. The conditions are (i) that the candidate shall have passed a qualifying examination as a whole, and, therefore, will only have to pass an examination in one or two subjects; (ii) that he may reasonably be expected to be able to complete his qualification by the end of the Student-Teacher year; and (iii) that facilities will be afforded him for continuing his studies for this purpose. The Board will not normally be prepared to approve the attendance whole-time at the Elementary School of any Student-Teacher who is recognised on incomplete qualifications, until he has passed his supplementary examination.

5. *Article 37 (b) (iii).*—This Article has been altered so as to enable the Board to recognise as Student-Teachers candidates who have not been Bursars, as soon as they have reached their 17th birthday.

6. *Article 39.*—Hitherto the number of Elementary School meetings which the Student-Teacher may attend during the week has been limited to eight, with the object partly of emphasising the fact that the Student-Teacher is to be regarded not as an ordinary member of the staff, but as a person undergoing training in the art of teaching, and partly of ensuring that he should have time both for recreation and for the continuance

of his general education. Experience of the Student-Teacher system has, however, shown that this restriction may in some cases prevent satisfactory arrangements being made. It may prevent the Student-Teacher from being placed in responsible and continuous charge of a class for any part of the year; further, in some rural districts and in some Secondary Schools the provision of satisfactory instruction for the Student-Teacher on a single day or on two half-days in each week has been found difficult. The Board have therefore decided to remove this limitation with a view to enabling Local Authorities to submit schemes adapted to local conditions in regard to the division of the Student-Teacher's time between training, instruction, and recreation. The Scheme need not be uniform in this respect for all the Student-Teachers in an Authority's area. Schemes providing for whole-time attendance at a Public Elementary School during the whole or part of the year must necessarily be regarded as experimental in the first instance.

The Board would remind Local Authorities that it is very desirable that those Student-Teachers in particular who intend to proceed direct to a Training College should be given facilities for keeping up the level of their general education.

L. A. Selby-Bigge

July 22nd, 1913.

APPENDIX.

CIRCULAR 821, RESPECTING ALTERATIONS IN THE
REGULATIONS FOR THE PRELIMINARY EDUCATION OF
ELEMENTARY SCHOOL TEACHERS.

This circular, dated the 28th June 1913, was addressed to Local Education Authorities.

1. During the past year the Board have been making special inquiries from Local Education Authorities and others with reference to the supply of teachers for Public Elementary Schools. They desire to express their thanks for the readiness with which these inquiries have been answered and for the valuable information which has been furnished to them, often at the cost of much time and trouble to those who have supplied it. They have thus been able to ascertain the difficulties which individual Authorities are experiencing in obtaining teachers for their schools and the steps which have so far been taken to meet those difficulties.

2. It will be remembered that in Circular 573, issued in 1907, and in the Prefatory Memorandum to the Regulations for the Preliminary Education of Elementary School Teachers for 1909, the Board expressed grave doubts as to whether the number of candidates for the teaching profession would prove at all adequate to the needs of the country. Since 1909 the difficulty has become more acute. The number of Bursars and of Pupil-Teachers in their first year recognised in England was 11,018 in 1906-7; in 1909-10 it was 7,191, and it has fallen in 1912-13 to 4,325. Without entering into detailed calculations, which are unnecessary for the present purpose, it may be taken as beyond question that the position with regard to the supply of teachers, not only for the immediate future but also for a good many years to come, is extremely serious. Exceptional difficulty in staffing many schools during the next few years is now inevitable. Unless the number of entrants to the profession can be increased largely and without delay, it will be impracticable in many areas to maintain the staffs of Public Elementary Schools at even their existing strength or quality, and the Board and Local Authorities must abandon for many years to come any hope of further reducing the size of classes or of increasing materially the proportion of Certificated Teachers—reforms on which a general improvement in the efficiency of Elementary Education must mainly depend. It is certain that the number of individuals now teaching in the schools cannot be diminished without hardship to the remaining teachers and without losing much of the ground which has been gained in recent years by the employment of less mechanical and more individual methods of instruction.

3. The problem of securing a sufficient supply of suitable candidates for the profession is large and complex, and its effective solution involves financial and administrative considerations of the gravest importance. It appears to the Board, however, that they can at once assist Local Education Authorities to some extent and as regards some aspects of the problem by modifying their Regulations for the Preliminary Education of Elementary School Teachers, and they propose to introduce into the next edition of those Regulations some

amendments which they hope will facilitate the entrance of suitable candidates to the profession by removing certain difficulties to which the Authorities have called their attention.

4. These amendments may most conveniently be explained under three heads :—

- (i) The provision of increased maintenance allowances for intending Bursars in Secondary Schools.
- (ii) The strengthening and improvement of the Pupil-Teacher system in rural districts.
- (iii) The provision of some assistance for systems of educating intending teachers not falling under the existing Regulations but adapted to the exceptional needs of certain areas.

Maintenance Allowances for Intending Bursars in recognised Secondary Schools.

5. Under Article 31 of the existing Regulations a boy or a girl who desires to be recognised as a Bursar must have been in receipt of continuous instruction for not less than three years at a recognised Secondary School. The Board are satisfied that this requirement has resulted in a marked improvement in the general education of intending teachers, and that abandonment of it would be inimical in the long run to the efficiency of elementary education. It has, however, been represented to them by various Authorities that many suitable candidates owing to want of means are unable to face the expense of the Secondary School course and the postponement of wage-earning. Some Local Education Authorities, it is true, make maintenance allowances to meet this difficulty, but hitherto assistance from the Board for this purpose has been confined to the year of Bursarship, when a candidate is already over 16 years of age. After careful inquiry the Board are satisfied that in many districts the provision of maintenance allowances at an earlier age than 16 is necessary, if the children of less well-to-do parents are not to be debarred by lack of means from entering the profession. They propose, accordingly, to amend Article 33 of the Regulations so as to enable them to take account of all sums paid by way of maintenance allowances to a Bursar during the whole period of full-time attendance at a Secondary School, and to contribute to such allowances on the basis of one-half of the sum paid for this purpose by the Authority. The Board's contribution will be limited to a maximum of 15% and will be paid only in respect of Bursars on whom the principal grant is paid.

In paying grants on Bursars recognised for the year 1913-14, the Board will take into account only sums paid to them by way of maintenance allowance during the year of bursarship. In the case of Bursars recognised for the year 1914-15 the Board will take account of maintenance allowances paid during the years 1913-14 and 1914-15; in the case of Bursars recognised for the year 1915-16, they will take account of maintenance allowances paid during the whole period of attendance at a recognised Secondary School.

Since the sole object of these new grants is to increase the existing number of Bursars, it will be a necessary condition of their payment that they should not have the effect of reducing the Authority's existing expenditure upon intending teachers, and a provision has been inserted in the Regulations with this object.

The Board recognise that, since their grants are not payable till the Bursar has completed his qualifications, Authorities who avail themselves of the Board's proposal will have to incur an increased

expenditure over, in many cases, a longer period before they receive any return in the shape of grants. They propose, therefore, to give an initial grant in the financial year 1914-15 to those Authorities who adopt or extend a system of maintenance allowances to Bursars or intending Bursars. A new Regulation (Article 34*) providing for this grant is set out in the Appendix. The rate of grant has been fixed by the amount at the Board's disposal for the purpose.* The grant will not be an instalment but will be given outright.

Extension and Improvement of the Pupil-Teacher System in Rural Districts.

6. The decline in the number of intending Teachers is most marked in the rural districts. This aspect of the problem is specially serious. In the past the rural districts have supplied some of the ablest teachers, and there is no reason why they should not continue to do so. Further, rural schools are small, and often have to educate in one Department children of both sexes and all ages. They therefore require in proportion to their size a larger number of teachers than town schools and cannot without loss of efficiency be worked with a smaller number of individual teachers than at present, whatever their qualifications may be. If the policy, which the Board have pursued for some years, of replacing Supplementary Teachers in rural schools by better qualified assistants is not to be abandoned, it is essential that the number of qualified persons available for such posts should be largely increased.

7. The existing provisions of Article 5 (d) and Article 28 were designed to meet the case of Pupil-Teachers in rural districts where Secondary Schools are unavailable. The number of Pupil-Teachers, however, recognised under those provisions has been very small of late years, though the Board are aware that some Local Education Authorities have recently been taking measures to increase it, and the Board recognise that in their present form these Articles of the Regulations do not meet adequately the circumstances of candidates in the rural districts, or give sufficient encouragement to Local Education Authorities and Head Teachers in the task of training and educating them for the profession.

8. The Board propose, accordingly, to make alterations in Articles 5 and 28 of the Regulations to the following effect :—

The restriction of rural areas in which Pupil-Teachers may be recognised under Article 28 to districts which for the purposes of the Local Government Acts are under a Rural District Council will be removed, and recognition will be possible in any suitable rural school if the Pupil-Teacher employed in it cannot reasonably be expected to attend regularly at a Secondary School. In such schools recognition will be given, if desired, from the age of 14, and may begin on the first day of the month after that in which the candidate reaches the age of 14. The period of recognition may be four years from the age of 14 or 15, or three years from the age of 15 or 16. The present grant under Article 28 will be replaced by the following grants :—

- (a) An annual grant in respect of the instruction and training given to the Pupil-Teacher by the Head Teacher; this grant will be half the amount paid by the Authority to the Head Teacher in respect of such instruction and training, but will not exceed 4*l*.

* See note on page x.

- (b) An annual grant of not more than 4*l.* in aid of the Authority's expenditure for the purposes of approved instruction supplementary to that given by the Head Teacher.
- (c) A principal grant of 10*l.*, payable after the end of the period of recognition on each Pupil-Teacher who becomes qualified for admission to a Training College or for recognition as an Uncertificated Teacher under Schedule I.C. of the Code.

9. These alterations make a considerable increase in the grants payable by the Board in aid of the Pupil-Teacher system in country districts. The grants under (a) and (b) recognise the part taken by the Head Teacher of the Elementary School in the education of the Pupil-Teacher, and emphasise the need for instruction complementary to that given by the Head Teacher. These grants will be paid annually, and are not dependent upon the final success of the candidate. The grant under (c), which is only payable upon the success of the candidate, is intended to aid the Authority in meeting any expenses incurred by them under Article 28 of the Regulations.

Another alteration enables the Pupil-Teacher to be recognised immediately after reaching the qualifying age. This change is designed to prevent any break in his continuous education and instruction. It does not imply that his practice in teaching should begin earlier than under the present Regulations. A scheme providing that from 14 to 15 years of age the intending teacher will be mainly if not entirely continuing his general education, will be fully in accordance with the Board's Regulations. On this point it is important to bear in mind that the Pupil-Teacher is not allowed to count upon the staff of the school in which he is employed for the purpose either of Article 10 or Article 12 of the Code. The change in the date of recognition will have the further effect of enabling Pupil-Teachers to enter Training Colleges or to qualify for recognition as Uncertificated Teachers at dates other than the first of August.

It will still be an essential condition of recognition that the school in which the Pupil-Teacher is employed must be accepted by the Board as suitable for his training. A course of instruction must be planned for him, leading up to an Examination of at least the standard required for recognition as an Uncertificated Teacher, and the Board will expect satisfactory arrangements to be made by the Authority for supplementing by suitable classes the instruction given by the Head Teacher.

The changes now made in the Regulations together with the large increase in the grants will, it is hoped, lead to substantial improvements in the system of educating and training rural Pupil-Teachers. The Board rely upon the co-operation of the Authorities in developing and maintaining an efficient system, which, by producing a steady supply of well-qualified teachers, shall add not merely to the numbers but to the strength of the teaching profession.

Assistance towards other Systems of educating Intending Teachers.

10. The Board are aware that a few Local Education Authorities have been able to obtain a supply of qualified teachers through avenues other than Bursarship or Pupil-Teachership as defined by the existing Regulations. The Board have no doubt that local conditions may from time to time indicate, as the most suitable method of educating intending teachers, arrangements which, though not falling within their Regulations, could properly be approved by them, and would result in producing

well-educated and efficient teachers. They are anxious in this, as in other branches of education, not to restrict unnecessarily the freedom of local organisation, and they will accordingly be prepared to consider any well-planned scheme submitted to them with a view to determining whether and upon what conditions they can make a grant towards its cost. They will require reasons for the Authority's belief that the scheme is required in their area to supplement or take the place of the Bursar or Pupil-Teacher systems. In assessing the grant the Board will have regard to (a) the extent to which the scheme succeeds or is likely to succeed in producing qualified teachers; (b) the expenditure incurred by the Authority in respect of it out of funds available under Part II. of the Education Act, 1902; and (c) the amount of the funds at the Board's disposal for the purpose of aiding such schemes; this amount is at present very limited.

11. The Regulations for the Preliminary Education of Elementary School Teachers, 1913, will be issued as soon as possible. The main alterations are printed as an Appendix to this Circular,* in which certain alterations in the Student-Teacher Regulations are also shown.† The Circular is issued now in order to give Local Education Authorities the opportunity of availing themselves at once of the Board's proposals.

* *Note.*—This Appendix has not been reprinted.

† *Note.*—Since Circular 821 was issued it has been found necessary to modify the terms of the draft Article 34* which was printed in the Appendix to the Circular. This Article as printed provided for a minimum grant of 2*l.* 10*s.* per head. The total amount available for grants under this Article for England and Wales is limited to 10,000*l.* The amount of the grant per head will depend on the number of Bursars recognised in England and Wales in the year 1914-15. In view of the limitation of the total amount it has been found impossible to fix in advance any minimum rate.

Regulations for the Preliminary Education of Elementary School Teachers.

(In force from the 1st of August, 1913, in England, excluding Wales and Monmouthshire.)

N.B.—Articles or parts of Articles which are either new or substantially modified are printed in italic type.

GENERAL.

Regulations not to apply where Recognition has been given under the previous Regulations.

These Regulations apply only to Pupil-Teachers, Pupils in Preparatory Classes, Bursars, and Student-Teachers recognised as such for the first time from or after the 1st of August 1913.

The Regulations which came into force on the 1st of August 1909 will continue to be applicable to Pupil-Teachers, Pupils in Preparatory Classes, Bursars, and Student-Teachers recognised as such from dates earlier than the 1st of August 1913.

CHAPTER I.

Conditions under which Pupil-Teachers may be employed and trained in Public Elementary Schools.

1. Boys and girls who are receiving (a) Training in teaching in Public Elementary Schools, together with (b) Instruction accepted by the Board under these Regulations, may be recognised as Pupil-Teachers, subject to the conditions hereinafter specified.

2. Candidates for recognition as Pupil-Teachers must be recommended to the Board by the Local Education Authority, if any, responsible for maintaining the Public Elementary Schools in which they are to be employed, and the Board must be satisfied that the

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Authority have taken steps, by obtaining the recommendation of the candidates' previous teachers or otherwise, to assure themselves that their attainments are such as to afford a reasonable prospect of their passing their Leaving Examination in due course, and that (in the case of girls) they are reasonably proficient in needle-work.

3. (a) Candidates for recognition as Pupil-Teachers must be suitable in respect of character, health, and freedom from personal defects. No candidate who has been a Bursar under Chapter VI. of these Regulations will be recognised as a Pupil-Teacher.

(b) A declaration must be signed by the candidate and his parent or guardian, and countersigned by the Authority, of the bonâ fide intention of the candidate to become a teacher in a Public Elementary School.

N.B.—It should be borne in mind that before candidates are admitted as Recognised Students in a Training College, the Board must be satisfied by a Medical Certificate in a prescribed form that the state of their health is satisfactory, and that they are free from serious bodily defect or deformity (Article 10(a) of Regulations for the Training of Teachers for Elementary Schools). A similar requirement will be made before Pupil-Teachers are recognised as Uncertificated Teachers.

4. *Except as provided in Article 5 (d)*, the period of recognition of Pupil-Teachers will begin on the 1st of August. The names of candidates proposed for recognition should be submitted to the Board before the preceding 1st of July.

5. (a) *Except as provided in Article 5 (d)*, Pupil-Teachers must be over 16, but not over 18, years of age at the close of the 31st of July last preceding their period of recognition.

(b) The period for which a Pupil-Teacher is recognised will normally be two years.

(c) A Pupil-Teacher may, with the approval of the Board, be recognised for one year, provided that he is over 17 years of age at the close of the 31st of July last preceding the beginning of the year of recognition.

(d) In *Country Schools*, candidates may be recognised as Pupil-Teachers for three years or for four years, provided that the Board are satisfied that they cannot reasonably be expected to attend a Centre recognised under Article 11.

At the beginning of the period for which recognition is accorded, a candidate for recognition *for four years must be over 14 years of age and not over 16*; a candidate for recognition *for three years must be over 15 years of age and not over 17*.

The period of recognition under this section may begin *on the first day of any month*. The names of candidates proposed for recognition should be submitted to the Board at least one month before the date from which recognition is desired.

(e) The original period of recognition of a Pupil-Teacher recognised for two years may, where sufficient reason is shown, be shortened with the consent of the Board by one complete year, provided that he is over 18 years of age before the end of the shortened period, and has passed an Examination qualifying him for admission to a Training College.

(e)* *The original period of recognition of a Pupil-Teacher recognised for three or for four years may, with the consent of the Board, be shortened by not more than one year.*

The Board will be prepared to give their consent to the termination of recognition, provided that the Pupil-Teacher is over 18 years of age before the end of the shortened period, and has passed the Leaving Examination prescribed by Article 28 (a).

When the period of recognition is shortened under this Section, it will be terminated on the last day of a month.

(f) Any interruption of the course of a Pupil-Teacher by illness or other unavoidable cause, involving a break of more than one month, must be notified to the Board at once by the Local Education Authority. In such an event the Board may suspend the recognition of the Pupil-Teacher during a part of the original period, and fix a correspondingly later date for the completion of the period of recognition and for the satisfaction of any condition determining the payment of Grant.

6. (a) All Pupil-Teachers must be employed under written Agreements, except that a Pupil-Teacher appointed by a Local Authority may be employed under a Minute of the Authority.

(b) Either the Local Education Authority or the Managers of the Public Elementary School in which the

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Pupil-Teacher is employed must undertake by such Agreement or Minute that the Pupil-Teacher shall be provided with instruction in accordance with Articles 11 to 19 or Article 28 (a) of these Regulations, during the period of the engagement, but the Agreement or Minute must not bind the Pupil-Teacher to receive such instruction at any particular Centre if his parent prefers that it shall be given to him at some other available Centre recognised or eligible for recognition under Article 11 of these Regulations.

(c) The Agreement or Minute must not require that the Pupil-Teacher shall perform any duties unconnected with the ordinary work of the Public Elementary School in which he is employed, except so far as may be necessary to ensure that he shall receive instruction in accordance with these Regulations.

7. (a) *A Pupil-Teacher must attend a Public Elementary School for employment or training in the art of teaching, according to a plan approved by the Board. The plan must provide for the employment or training of the Pupil-Teacher during not more than half and not less than a quarter of the meetings of the Public Elementary School throughout the period for which the Pupil-Teacher is recognised, except the first year where the period of recognition is four years; during that year the plan need not provide for any employment or training in teaching.*

The Local Education Authority will be required to submit a plan for the employment or training of Pupil-Teachers in Schools maintained by them, which need not be uniform for the different Schools throughout the Authority's area. Before grant is paid, the Board will require a certificate that the plan has been carried out.

(b) The conditions of employment of every Pupil-Teacher must be such as to ensure that he shall have either two half-days or one whole day in each week free from employment or other requirement, in addition to the time set apart for his instruction.

(c) Every Pupil-Teacher must be either in employment or training in a Public Elementary School or in receipt of instruction accepted by the Board under these Regulations throughout the whole of each year of his recognition, with the exception of ordinary holidays. In the event of the closure of the Public Elementary School or place of instruction through

unavoidable cause for more than a fortnight, provisional arrangements must be made for the employment of the Pupil-Teacher's time after consultation with an Inspector of the Board.

(d) In any case in which, owing to a change of residence of a parent or guardian or for any other sufficient reason, it becomes necessary to arrange for the transfer of a Pupil-Teacher during the period of his recognition by the Board to employment in another Elementary School or instruction in another Pupil-Teacher Centre, whether within the area of the same or that of another Local Education Authority, a notification of the transfer must be sent to the Board in a form prescribed by them; and it will be a condition of continued recognition that provision shall have been made for the instruction and employment or training of the Pupil-Teacher to proceed without breach of continuity.

(e) In calculating the number of meetings during which a Pupil-Teacher has been employed or trained in Public Elementary Schools, every meeting during any part of which he has been so employed or trained must be counted as a meeting.

8. (a) No Pupil-Teacher may be employed or trained in any school which is not selected by an Inspector of the Board as suitable for the purpose of training Pupil-Teachers.

(b) Not more than four Pupil-Teachers in all may as a rule be employed in any department, but a larger number recommended by the Inspector may be employed in any case where the Board are satisfied that the department is specially adapted for the purpose of training Pupil-Teachers.

(c) Pupil-Teachers must be trained under the supervision of the Head Teacher of the school in which they are employed, and the Head Teacher must keep registers showing the time spent by each Pupil-Teacher in employment or training and full records of the nature of the employment and training. These registers must be verified from time to time by the Managers of the school.

9. Girls may not be employed, except with the special consent of the Board, as Pupil-Teachers in a boys' school, or boys in a girls' or infants' school.

10. The recognition of a Pupil-Teacher may be withdrawn at any time by the Board if any of the

conditions on which he was recognised cease to be fulfilled, or if the Board are satisfied that he is not receiving instruction or training in teaching such as they can accept under these Regulations, or if an Inspector of the Board reports unfavourably on his suitability for the teaching profession.

CHAPTER II.

Recognition of Centres for the Instruction of Pupil-Teachers.

11. (a) Where possible, the instruction of Pupil-Teachers must be given in a Pupil-Teacher Centre recognised by the Board under these Regulations.

(b) A Pupil-Teacher Centre may either :—

- (i) Form an integral part of a Secondary School, which is on the List of Schools Recognised as Efficient, and is further recognised as suitably equipped for the special purpose of giving instruction to Pupil-Teachers, but is not conducted for private profit or farmed out to the Head Master or Mistress ; or
- (ii) With the special consent of the Board, be otherwise organised.

(c) A Centre will not be regarded as an integral part of a Secondary School, unless it is under the same Governing Body and the same Head Master or Mistress as the Secondary School, and unless the Pupil-Teachers share the ordinary corporate life of the pupils of the school. In so far as they are not inconsistent with these Regulations, or inapplicable to Pupil-Teachers, the Regulations for Secondary Schools must be observed as regards a Centre which forms an integral part of a Secondary School in receipt of grant from the Board.

(d) A Centre which does not form an integral part of a Secondary School may either :—

- (i) Be regarded as attached to one or more Secondary Schools or, in places where no Secondary School is available, to one or more Higher Elementary Schools, if the Board are satisfied that the instruction is properly co-ordinated, and that arrangements are made for pupils

from the Secondary or Higher Elementary Schools to pass in the ordinary course to the Centre; or

- (ii) Be conducted, with or without Preparatory Classes recognised under Article 20, as a separate institution.

(e) A Centre which does not form an integral part of a Secondary School must, unless it was already recognised before the 1st of August, 1907, be provided by the Council of a County, County Borough, Borough, or Urban District or by a Joint Body formed under an agreement between two or more such Councils.

(f) The Centre must be conducted by a Governing Body acting under and in accordance with a scheme or minute or body of written regulations which states its constitution and defines its functions both as regards responsibility for general control and as regards immediate responsibility (including that of the Head Master or Head Mistress) for the conduct of the Centre, and which is approved by the Board. A copy of the scheme or minute or body of regulations as approved must be deposited with the Board, and its provisions must not be varied or departed from without the approval of the Board.

(g) The School Year of a Centre will begin on the 1st of August and end on the 31st of July.

(h) Application for the recognition of a new Centre should ordinarily be made not later than the 1st of July in any year, but the Board may, if they think fit, accept a later application and give recognition for that part only of the following School Year which begins on the 1st of January.

(i) Some person must be appointed to act as Correspondent with the Board, and must not, except with the special approval of the Board, be a paid teacher of a Centre or of a Public Elementary School or of a Secondary School.

12. A Centre must, unless some other arrangement has received the special consent of the Board, be open for at least five meetings each week during thirty-six or more weeks in the year (except in the case of closure under medical authority or for any other unavoidable cause approved as such by the Board); these meetings must be held after 7.30 a.m. and before 6 p.m., and the

minimum duration of a meeting must be two hours. The Board may, by a special arrangement made at the time of recognition of any Centre, accept meetings of exceptional lengths as the equivalents of more than one meeting in each case, for the purposes of this Article and of Article 24 of these Regulations. The Pupil-Teachers must attend with due regularity.

13. (a) The curriculum of a Centre must make provision for instruction in English Language, Literature, and Composition, History, Geography, Mathematics (including Arithmetic), Science (including practical work), Reading and Recitation (including voice production), Music, Drawing, and Physical Exercises; and, unless special dispensation has been obtained from the Board, in at least one Language other than English. In a Centre for girls provision must be made for Needlework, and in a Centre for boys, as a rule, for Manual Work. The course of study followed by each Pupil-Teacher must, except with the special approval of the Board, be so arranged as to cover during the period of his recognition all the subjects included in the curriculum.

(b) Every Pupil-Teacher in a Centre must, except with the special consent of the Board, enter for an approved Leaving Examination, which may be either the Preliminary Examination for the Elementary School Teachers' Certificate, or some other Examination accepted by the Board as a qualification for admission to a Training College.

Particulars of the Examinations qualifying for admission to a Training College, and the Regulations and Syllabus for the Preliminary Examination for the Elementary School Teachers' Certificate are issued as separate pamphlets (*see the note on page ii*). No student admitted to a Training College is allowed to be prepared for an Examination forming a recognised stage towards a University Degree as part of his Course, unless he has either

(a) passed the Preliminary Examination for the Certificate and obtained in that Examination distinction in English, History, Geography, Elementary Mathematics, one Language, which must be either Greek, Latin, French, or German, and either in a second Language or in Elementary Science; or

(b) passed some other Examination which may have been accepted by the Board for the purpose.

(c) Except with the approval of the Board, Pupil-Teachers in a Centre must not be allowed to enter for any external Examination in secular subjects other than their Leaving Examination.

(d) A full statement of the organisation and curriculum of the Centre must be submitted for the approval of the Board. When approval has once been given, the statement need not again be submitted so long as no alteration is required by the Board or desired by the Governing Body. Detailed Time Tables of the work of the Centre must be forwarded to the Inspector at the beginning of each School Year. Instruction must be given in accordance with the approved Time Table, and temporary deviations from it should not be made, except in a case of special emergency, without previous notice to the Inspector.

(e) The attendance of all Pupil-Teachers in respect of whom grants are claimed must be registered in the special registers provided by the Board, and in accordance with the instructions printed thereon. The Governors are responsible for the accuracy of these records. Systematic records of the conduct and progress of each Pupil-Teacher must also be kept.

(f) No Pupil-Teacher in a Centre may attend any school or Class recognised under the Regulations of the Board for Technical Schools, Schools of Art and other Forms of provision of Further Education, except with the written consent of the Head Master or Mistress of the Pupil-Teacher Centre.

14. (a) The Teaching Staff of the Centre must be approved by the Board and must be sufficient in numbers and qualifications to provide for each Pupil-Teacher adequate instruction in each subject of the curriculum.

(b) The number of pupils in a Class should be limited to 30 and must in no case exceed 35.

(c) In the case of a Centre attended entirely by girls, the principal member of the Staff must be a Head Mistress and at least one-half of the permanent Staff must be women, and in the case of a Centre attended mainly by girls, at least one-half of the permanent Staff, other than the Head Master or Mistress, must be women; but these rules will not be enforced in such a way as to cause hardship in the case of any teacher who was already employed in Central Classes at the date when such Classes obtained recognition as a Centre.

(d) The members of the Teaching Staff may not undertake any other duties which, in the opinion of the Governing Body, or of the Board, would interfere with the efficient discharge of their duties in the Centre.

15. (a) The Centre must be efficient; must not compete unduly with any other Centre, or with a neighbouring school providing higher education; and, from its character and financial position, must be eligible to receive aid from public funds.

(b) A Centre, to the Governing Body of which grants are to be paid under these Regulations, must not be conducted for private profit or farmed out to the Head Master or Mistress.

(c) The salaries of the Teaching Staff must in no case be subject to variation according to the amount of grant received.

(d) The Centre may be with or without fees, but any scale of fees must be approved by the Board.

(e) Full accounts of the income and expenditure of the Centre must be furnished annually; and all other returns called for by the Board must be duly made.

In the case of a Centre forming an integral part of a Secondary School, the accounts of the Centre should be included in those of the School.

All accounts must be made up to the 31st of March in each year.

16. (a) The premises of the Centre must be sanitary, convenient for teaching purposes, adapted to the circumstances of the Centre, and provided with adequate equipment and appliances for the approved course of instruction. Suitable provision should be made for organised games. The plans of both site and buildings for new Centres or for the enlargement of existing Centres must be drawn in accordance with the Building Regulations for Secondary Schools and Pupil-Teacher Centres, and must be submitted to the Board for approval.

(b) The premises of any Centre must be placed at the disposal of the Board free of charge at any reasonable time for the purpose of holding an examination.

17. (a) The Centre must be open at all times to the inspection of the Board.

(b) A meeting of the Governors, of which sufficient notice will be given, must be held, if required, when the Centre is inspected, and the accounts and any other papers necessary for inquiry into the control and conduct of the Centre must be produced when required by the Board or by an Inspector of the Board.

(c) Notice must be sent to the Inspector, as soon as is possible in each case, of every date on which the Centre will be closed or its ordinary work suspended.

18. When Pupil-Teachers are instructed at a Centre at a distance from their homes, the Board must be satisfied as to the arrangements made for their care and supervision during their absence from home, and for the provision of proper facilities for meals, rest, and recreation.

19. (a) No pupil shall be required, as a condition of being admitted into or remaining in the Centre as a day pupil, to attend or abstain from attending any Sunday school, place of religious worship, religious observance, or instruction in religious subjects in the Centre or elsewhere, and

(b) The times for religious worship or for any lesson on a religious subject shall be conveniently arranged for the purpose of allowing the withdrawal of any day pupil therefrom.

CHAPTER III.

Instruction in Preparatory Classes of Boys and Girls intending to become Pupil-Teachers.

20. (a) Where it is shown to the satisfaction of the Board that no better facilities can be provided for the instruction after the age of 14 of boys or girls intending to become Pupil-Teachers, Preparatory Classes attached to a Pupil-Teacher Centre or to Central Classes conducted in accordance with arrangements accepted under Article 28 may be recognised by the Board, but no Preparatory Classes will be recognised at a Centre forming part of or attached to a Secondary School.

(b) Preparatory Classes must, as a rule, be conducted as an integral part of a Pupil-Teacher Centre, in the same premises and under the same management. The Board may, however, in special circumstances recognise Preparatory Classes attached to a Pupil-Teacher Centre, but not forming an integral part of it, if they are satisfied that the instruction is properly co-ordinated and that arrangements are made by which the Pupils from the Preparatory Classes will pass in the ordinary course to the Centre.

(c) Preparatory Classes must be open, except in the case of closure under medical authority or for any other unavoidable cause approved as such by the Board, for at least nine meetings each week of not less than two hours each, held after 7.30 a.m. and before 6.0 p.m., during thirty-six or more weeks in the year, and must provide a suitable course of instruction during either one or two years for Pupils who are intending to become Pupil-Teachers.

21. Pupils receiving instruction in a Preparatory Class may not be employed in any capacity in a Public Elementary School.

22. (a) In order to be registered in a Preparatory Class, candidates must be suitable in respect of character, health, and freedom from personal defects. A declaration must be made on their behalf that they enter the Preparatory Class with the intention of eventually becoming Pupil-Teachers, and a suitable entrance examination must be held to determine their fitness to be admitted and to profit by the instruction given.

(b) The School Year of a Preparatory Class will begin on the 1st of August. Candidates for admission must be over 14, but not over 16, years of age at the close of the 31st of July last preceding the beginning of the School Year.

(c) The Board must be satisfied that the proportion of Pupils taught in a Preparatory Class who become Pupil-Teachers is not unduly small. Should they not be so satisfied, they may withhold the Grant in any year, or pay it subject to a deduction under Article 45.

(d) Other pupils may be instructed with the Pupils registered in a Preparatory Class, provided that the Board are satisfied that the instruction of the registered Pupils will not thereby be interfered with; but no grant will be payable on account of such pupils.

23. In other respects the provisions of Articles 11 to 19 apply to Preparatory Classes as well as to Pupil-Teacher Centres.

CHAPTER IV.

Grants for Centres and Preparatory Classes.

24.—(a) Grant on account of each recognised Pupil-Teacher who has received instruction in a recognised Centre will be payable after the close of his period of recognition as fixed by Article 5, in accordance with the following scale :—

- (i) Pupil-Teachers recognised for one year - £7 10s.
- (ii) Pupil-Teachers recognised for two years - £15.

(b) In order that the full Grant may be payable on account of a Pupil-Teacher, the following conditions must have been satisfied :—

- (i) The Pupil-Teacher must have been employed, trained, and instructed in accordance with Articles 1 to 19 throughout the period of recognition.
- (ii) The Pupil-Teacher must have passed either the Preliminary Examination for the Elementary School Teachers' Certificate, or some other examination accepted by the Board as a qualification for admission to a Training College, either before or within one year after the last day of his period of recognition as a Pupil-Teacher.

(c) A Grant of £2 10s. for each year of recognition will be payable on account of a Pupil-Teacher in whose case condition (i) has been satisfied, but not condition (ii).

(d) No Grant will be payable on account of any Pupil-Teacher whose recognition is withdrawn by the Board under Article 10 of these Regulations.

(e) In the case of a Pupil-Teacher instructed in a Centre who has been recognised for a period of two years an instalment of Grant at the rate of £7 will be payable after the close of his first year of recognition, provided that the Board are satisfied that the requirements of Article 7 (c) have been fulfilled for the year, and will continue to be fulfilled for the following year.

(f) The balance of Grant on account of Pupil-Teachers who have completed their periods of recognition during each School Year, and in whose cases

14 *Grants for Centres and Preparatory Classes.*

the conditions qualifying them for Grant under Article 24 (b) or (c) have been satisfied, will be payable after the close of that year, and will be subject to adjustment by the deduction of the amounts of all instalments paid under Article 24 (e) on account of Pupil-Teachers instructed in the Centre in whose cases the conditions qualifying them for Grant have not ultimately been satisfied.

25. A Grant of £4 yearly will be paid for each Pupil whose attendance has been registered at not less than 80 per cent. of the meetings of a Preparatory Class during the School Year, provided that the conditions of Articles 20 to 23 are satisfied, and that he has been actually admitted to instruction before the 1st of October and been in receipt of continuous instruction thereafter throughout the year. No Grant will be paid under this Article for any Pupil for more than two years.

26. (a) The Grant under Articles 24 and 25 will, except as provided by Article 26 (b) and (c), be paid annually to the Council or Joint Body or Governors by whom the Centre or Preparatory Class is provided.

(b) In the case of a Centre or Preparatory Class which does not fulfil the requirements of Article 15 (b), but is aided by a Local Education Authority, the Grant will be paid to that Authority.

(c) In cases where an arrangement has been made under which the cost of instruction of Pupil-Teachers attending a Secondary School is paid by a Local Education Authority, the Grant will be paid to that Authority on their application and on that of the Governing Body of the School.

(d) Grant on account of any Pupil-Teacher who has been transferred from one Centre to another during the course of his period of recognition will be payable as part of the Grant for the Centre to which he is transferred, and any instalment paid on account of him for either Centre will be taken into account in calculating the balance of Grant payable under Article 24 (f) for the Centre to which he is transferred. Any adjustment that may be necessary must be made by arrangement between the Local Authorities and Governing Bodies concerned.

27. (a) A grant will be paid annually to each County Council (other than the County Council for London) in aid of the general travelling and other

incidental expenses of the Pupil-Teachers in their area. This Grant will be calculated at the rate of £2 upon each recognised Pupil-Teacher employed in a Public Elementary School maintained by the Council, on whose account Grant or an instalment of Grant is paid under Article 24.

(b) If an arrangement has been made with a University to hold for the Pupil-Teachers instructed in a Centre a Leaving Examination of not less than Matriculation standard by means of papers set in accordance with the curriculum of the Centre, and if the subject and the standard of the Examination and the scale of fees are regarded by the Board as suitable for Pupil-Teachers, a Grant in aid of the Examination fees will be paid to the Council or Governing Body by whom the Centre is provided. The amount of the Grant will be fixed by the Board after considering the total cost of the Examination to the Centre, and will not be in excess of £2 for each Pupil-Teacher examined.

CHAPTER V.

Instruction of Pupil-Teachers otherwise than in Centres.

28. (a) Where it is shown to the satisfaction of the Board that a Pupil-Teacher *cannot reasonably be expected to attend* a Centre recognised under Articles 11 to 19, or that the instruction of an individual Pupil-Teacher can be better provided for in some other manner, the Board may approve such arrangements for instruction in Central Classes or otherwise as appear to them to be the best possible in the circumstances.

Every Pupil-Teacher instructed under this Article must, except with the special consent of the Board, enter for an approved Leaving Examination, which may be either the Preliminary Examination for the Elementary School Teachers' Certificate, or some other examination accepted by the Board as qualifying for admission to a

Training College or for recognition as an Uncertificated Teacher under Schedule I.C. of the Code of Regulations for Public Elementary Schools.

(b) Registers showing the time spent by each Pupil-Teacher under instruction, and records of the nature of the instruction must be kept.

(c) *The Board may at any time call for such evidence as they may think necessary to show that the Pupil-Teacher continues to be suitable for the teaching profession, and is making satisfactory progress in his work.*

(d) *Except with the approval of the Board, a Pupil-Teacher instructed under this Article must not be allowed to enter for any external examination in secular subjects other than his Leaving Examination.*

(e) *Grant is payable to the Local Education Authority as follows in respect of a Pupil-Teacher who has been employed in accordance with the conditions of Article 7, and has received suitable and satisfactory instruction under this Article:—*

(i) *An annual grant in respect of instruction and training given to the Pupil-Teacher by the Head Teacher of the School in which the Pupil-Teacher is recognised.*

This grant will be half the amount paid to the Head Teacher by the Local Education Authority in respect of such instruction and training, but will not exceed 4l. ;

(ii) *An annual grant in aid of the Authority's expenditure for the purposes of approved instruction supplementary to that given by the Head Teacher.*

This grant will be half the Authority's expenditure upon such instruction given to the Pupil-Teacher, but will not exceed 4l. Before paying any grant the Board will require to be satisfied that the expenditure of the Local Education Authority on such instruction has been sufficient to justify a contribution by the Board ;

(iii) *A final grant of 10l.*

This grant will be payable on condition that the Pupil-Teacher (a) has completed either the full course of instruction and training, or a course shortened under Article 5 (e), and (b) has either before or within a year of the*

termination of the period of his recognition passed an examination accepted by the Board as qualifying for admission to a Training College or for recognition as an Uncertificated Teacher under Schedule I.C. of the Code of Regulations for Public Elementary Schools.

Where annual grants are paid in respect of part of a year the amounts will be subject to a proportionate reduction.

(f) The Board will not approve the transfer of a Pupil-Teacher instructed under this Article to a Centre recognised under Article 11 or vice versâ, unless good reason for the change is shown.

The grant paid in respect of an individual where the transfer is allowed will not in any case exceed the maximum amount that would have been payable had the Pupil-Teacher been instructed throughout under this Article.

CHAPTER VI.

Grants in aid of the Education and Maintenance of Bursars.

29. A Local Education Authority for Higher or Elementary Education may recommend for recognition as Bursars boys or girls who intend to become in the future Elementary School Teachers and are attending full time at a Secondary School which is on the List of Secondary Schools Recognised as Efficient, but require assistance in order to render their continuance at the school financially possible.

30. The period of recognition of a Bursar will be for one year only, and will begin on the 1st of August. Application for recognition must be made before the preceding 1st of July.

31. Recognition of a Bursar will be subject to the fulfilment of the following conditions :—

- (a) The Candidate must be over 16, but not over 18, years of age, at the close of the 31st of July last preceding the period of recognition.

(b) A Declaration must have been signed by the Candidate and his parent or guardian, and countersigned by the Head Master or Mistress of the Secondary School and by the Authority, of the bonâ fide intention of the Candidate to become a teacher in a Public Elementary School.

(c) The Candidate must be suitable in respect of character, health, and freedom from personal defects.

N.B.—It should be borne in mind that before candidates are admitted as Recognised Students in a Training College, the Board must be satisfied by a Medical Certificate in a prescribed form that the state of their health is satisfactory, and that they are free from serious bodily defect or deformity (Article 10(a) of Regulations for the Training of Teachers for Elementary Schools). A similar requirement will be made before Bursars are recognised as Uncertificated Teachers.

(d) The Candidate must produce a certificate from the Head Master or Mistress of the Secondary School (a) that he is not unsuitable to become an Elementary School Teacher, and, unless he has already passed an Examination accepted by the Board as a qualification for admission to a Training College, (b) that his attainments are such that he may be reasonably expected to pass such an examination during the course of the year. In the case of a girl, the certificate must also show that she is reasonably proficient in needlework.

(e) The Authority must satisfy the Board that the Candidate will be provided during the period of the Bursarship with education free of fees at a Secondary School, which is on the List of Secondary Schools Recognised as Efficient, with or without a maintenance allowance, either out of the Authority's funds or out of charitable funds available for the purpose. The maintenance allowance may either be paid to the parent or guardian of the Bursar, or may be applied by the Authority in the provision for the Bursar of travelling facilities, meals, or the like.

(f) The Candidate must, *as a rule*, have been receiving continuous instruction in an efficient Secondary School or Schools for the three years imme-

diately before the period of recognition, and, except with the special consent of the Board given in advance, must hold his Bursarship in the school in which the last year of the qualifying period was spent.

32. (a) The recognition of a Bursar may be withdrawn at any time by the Board if any of the conditions on which he was recognised cease to be fulfilled, or if an Inspector of the Board reports unfavourably on his suitability for the teaching profession.

(b) At the end of the year of recognition, Bursars may, if they do not remain at the Secondary School, either (i) enter a Training College for Elementary School Teachers, or (ii) a Training School of Domestic Subjects, or (iii) become Student-Teachers under Chapter VII. of these Regulations in an area in which the Authority has brought into operation a scheme, approved by the Board of Education, for the supervision of Student-Teachers.

(c) A person who has been a Bursar will not, as a rule, be recognised by the Board as an Uncertificated Teacher even if he is above the age of 18 and has passed an Examination qualifying him for recognition as an Uncertificated Teacher, unless he has either been for at least a year in a Training College, or a Training School of Domestic Subjects, or been employed or trained for a year as a Student-Teacher.

33. *Grant is payable as follows in respect of each Bursar to or through the Local Education Authority by whom the Bursar was recommended for recognition:—*

(a) *A grant in respect of maintenance allowance.*

If the amount paid by way of maintenance allowance to the Bursar is not less than 5l. or more than 10l., the grant will be half the amount.

If the amount paid by way of maintenance allowance exceeds 10l., the Board will increase their grant in the same proportion up to a maximum total of 15l.; provided that they may reduce or withhold the increased grant, (i) if in their opinion its payment in full would reduce the Authority's expenditure upon maintenance allowances to intending teachers from sources other than the Board's grants below the average amount of such expenditure in the financial years 1911-12 and 1912-13, or (ii) if the Authority, while not reducing their expenditure, have not increased the number of Bursars.

In the case of Bursars recognised for the year 1913-14, account will be taken for the purpose of this Article of maintenance allowances paid during the year of Bursarship only. In the case of Bursars recognised for the year 1914-15, account will be taken of maintenance allowances paid during the years 1914-15 and 1913-14. In the case of Bursars recognised for the year 1915-16, account will be taken of all sums paid by way of maintenance allowance during the time the Bursar has been at a Secondary School which is on the list of Secondary Schools Recognised as Efficient;

(b) A grant of 10l.

(c) Both the above grants are payable subject to the following general conditions:—

(i) The Bursar must have received continuous and suitable instruction throughout the year of his Bursarship to the satisfaction of the Board.

The absence of a Bursar from the Secondary School for a period not exceeding one month for a test in actual teaching in a Public Elementary School will not be regarded as interrupting the continuity of the instruction for the purpose of this regulation.

(ii) The Bursar must have passed the Preliminary Examination for the Elementary School Teachers' Certificate or some other Examination accepted by the Board as a qualification for admission to a Training College either before or within one year after the last day of his period of recognition as a Bursar.

A Bursar will be admissible to the Preliminary Examination for the Certificate during his year of recognition as such.

(iii) The Bursar must have (a) entered a Training College and signed the Training College Undertaking, or (b) entered a Training School of Domestic Subjects and signed the Declaration required in that case, or (c) completed a year of satisfactory service as a Student-Teacher in a Public Elementary School.

N.B.—*Any grant paid on account of a Bursar on the footing that he has entered a Training College will be recoverable if the Training College Undertaking is not ultimately signed by him.*

- (iv) Any serious interruption of the course of a Bursar by illness or other unavoidable cause, and in particular any interruption involving a break of more than one month, must be notified to the Board at once by the Authority by whom the Bursar was recommended for recognition. In such an event the Board may suspend the recognition of the Bursar during a part of the original period, and fix a correspondingly later date for the completion of the period of recognition and for the satisfaction of any condition determining the payment of Grant.

34. (a) A Grant calculated at the rate of £2 upon each Bursar ordinarily resident in the area for the purposes of Elementary Education of a County Council (other than the County Council for London) will be paid to the Authority by whom the Bursar was recommended, provided that he has satisfied the conditions of Article 33 (c) (i). These Grants will be in aid of the general travelling and other incidental expenses of Bursars.

(b) If the Governors of a Secondary School have arranged with a University to hold for Bursars a Leaving Examination of not less than Matriculation standard by means of papers set in accordance with the school curriculum, and if the subjects and the standard of the Examination and the scale of fees are regarded by the Board as suitable for Bursars, a Grant in aid of the Examination fees will be paid to the school. The amount of the Grant will be fixed by the Board after considering the total cost of the Examination to the school, and will not be in excess of £2 for each Bursar examined.

34.* *A special grant on account of each Bursar recognised from the 1st of August 1914 will be paid not later than the 31st of March 1915 to each Local Education Authority which introduces or extends a system of maintenance allowances eligible for aid under Article 33 (a). This grant is in aid of the initial cost of introducing or extending such a system and will not be repeated. The amount of the grant will depend upon the total number of Bursars recognised from the 1st of August, but it will not be more than 3l.*

CHAPTER VII.

Recognition of Student-Teachers.

35. (a) Student-Teachers may be recommended for recognition by the Board, subject to the conditions specified in this chapter, by a Local Education Authority which has brought into operation a scheme approved by the Board for the supervision and training of Student-Teachers and for such continuance of their general education as may be possible in the circumstances. A Local Education Authority for Elementary Education which is not also the Local Education Authority for Higher Education may adopt a scheme framed by the latter Authority and bring it into operation by expressing to the Board its willingness to co-operate with the Higher Education Authority in administering it, so far as the use of the Elementary Schools and the regulation of Student-Teachers in those schools are concerned.

(b) The recognition of a Student-Teacher will date from the day on which employment or training in that capacity begins, and will ordinarily be for not more than one year, but may be continued for a second year with the approval of the Board.

36. (a) Subject to the exception provided for in the following paragraph, candidates for recognition as Student-Teachers must have passed an examination accepted by the Board as a qualification for admission to a Training College.

N.B.—A list of these examinations is given in Appendix A. of the Regulations for the Training of Teachers for Elementary Schools, and is also published separately (see the note on page ii).

(b) The Board may recognise as a Student-Teacher a candidate who has passed as a whole one of the examinations referred to in Article 36 (a), but has not passed in all the subjects required for admission to a Training College, if they are satisfied that the candidate may reasonably be expected to complete his qualification for admission to a Training College before the end of the year for which he is recognised as a Student-Teacher, and that facilities will be afforded him for the continuance of his general education so far as may be needed for this purpose.

37. (a) Candidates who have been Bursars may be recognised as Student-Teachers, if they satisfy the requirements of Article 36.

(b) *Candidates who have not been Bursars must satisfy both the requirements of Article 36 and the following conditions:—*

- (i) *They must have been receiving continuous instruction for not less than three years in an efficient Secondary School or Schools.*
- (ii) *They must be suitable in respect of character, health, and freedom from personal defects to become Student-Teachers.*

N.B.—It should be borne in mind that before candidates are admitted as Recognised Students in a Training College, the Board must be satisfied by a Medical Certificate in a prescribed form that the state of their health is satisfactory, and that they are free from serious bodily defect or deformity (Article 10(a) of the Regulations for the Training of Teachers for Elementary Schools). A similar requirement will be made before Student-Teachers are recognised as Uncertificated Teachers.

(iii) *They must be over 17 years of age.*

(iv) *They must produce certificates signed by the Head Masters or Mistresses of their Secondary Schools that they are in character and ability fit and proper persons to be teachers in Elementary Schools;*

(v) *They must make declarations that they desire to become Elementary School Teachers.*

38. Student-Teachers may either (a) be employed as part of the Staff of Public Elementary Schools selected with the approval of the Board as suitable for the purpose or (b) be allowed to attend such schools for the purpose of practical instruction in teaching or for observation in accordance with Article 54 (a) of the Code of Regulations for Public Elementary Schools.

39. *The Student-Teacher must attend the Elementary School in accordance with the provisions of the scheme approved for the area by the Board. The Head Teacher of the school must keep registers showing the time spent by the Student-Teacher in the school and full records of the manner in which it was employed.*

40. (a) *In addition to the practical training and experience which they obtain in the Elementary School, Student-Teachers must obtain such further general education as is provided for in the scheme approved for the area by the Board. Their course of study and*

training must be properly supervised in accordance with the scheme.

(b) *Except as provided in Article 36 (b), Student-Teachers are not permitted to enter for any examination during the year of Student-Teachership without the express approval of the Board obtained beforehand.*

41.—(a) Student-Teachers recognised under Article 38(a) must be employed under written Agreements, except that a Student-Teacher appointed by a Local Authority may be employed under a Minute of the Authority.

(b) The Agreement or Minute must not require that the Student-Teacher shall perform any duties unconnected with the ordinary work of the Public Elementary School in which he is employed, except so far as may be necessary to ensure that he shall obtain general education in accordance with these Regulations.

(c) The transfer of a Student-Teacher to another Elementary School, whether within the area of the same or that of another Local Education Authority, must be notified to the Board.

42. (a) The recognition of a Student-Teacher may be withdrawn at any time by the Board if any of the conditions on which he was recognised cease to be fulfilled, or if the Board are satisfied that he is not receiving training in accordance with the approved Scheme, or if the requirements of this Chapter are not observed in his case, or if an Inspector of the Board reports unfavourably on his suitability for the teaching profession.

(b) In so far as they are not inconsistent with these Regulations, the requirements of Articles 10 to 16 of the Code of Regulations for Public Elementary Schools apply to Student-Teachers recognised under Article 38 (a) of these Regulations.

CHAPTER VIII.

Grants in aid of Special Systems.

43. (a) *The Board are prepared to consider proposals from Local Education Authorities for the preliminary education of Elementary School Teachers by systems*

other than those aided under Chapters 1 to 4, Chapter 5, or Chapter 6 of these Regulations, and if they approve any proposal may make a grant to the Authority in aid of their expenditure in respect of it.

(b) An Authority having such an alternative Scheme to submit must state the reasons for which it is required in their area to supplement or to take the place of the systems aided under the Chapters named above, and must give a detailed estimate of the expenditure which the Scheme will involve.

(c) In assessing the grant in aid of such a Scheme, the Board will take into account (i) the extent to which it succeeds or is likely to succeed in producing qualified Teachers, (ii) the expenditure incurred by the Authority in respect of it out of funds available under Part II. of the Education Act, 1902, and (iii) the amount of the funds at the Board's disposal for the purposes of this Chapter.

CHAPTER IX.

General Provisions as to Grants under these Regulations.

44. No Grants will be made under these Regulations for any boy or girl on whose account a Grant under any other Regulations (with the exception of a Grant on account of a Bursar as a pupil in a Secondary School under the Regulations for Secondary Schools) is paid by the Board in respect of the same period.

45. The payment of Grants under these Regulations is subject to the fulfilment of the requirements of the Regulations, but if any of the requirements have not been fulfilled or have been fulfilled during part of the year only, the Board have power either to withhold the Grant or, if they think fit, to pay it with or without deductions; and if any question arises as to the interpretation of these Regulations or as to the fulfilment of any of the conditions of Grant, the decision of the Board shall be final.

46. The Grants made under these Regulations are intended to supplement and not to supersede local efforts, and must be expended to the satisfaction of the Board.

These Regulations will come into force in England, with the exceptions of Wales, the County of Monmouth, and the County Borough of Newport, on the 1st of August, 1913; and except as otherwise provided the Regulations for the Preliminary Education of Elementary School Teachers for 1909 [Cd. 4628] now operative in England will cease to be so operative on that date.

L. A. SELBY-BIGGE.

July 22nd, 1913.

Universities and Training and Examination of Teachers.

- Statement of Grants in aid of Technological and Professional Work in Universities [Cd. 6794.] Price 1d.; by post, 1½d.
- Regulations for Science Scholarships. Price 1d.; by post, 1½d.
- Prospectus of Whitworth Scholarships and Exhibitions. Price 1d.; by post, 1½d.
- Reports from Universities and University Colleges, 1910-11:—
 Vol. I. [Cd. 6245.] Price 1s. 11d.; by post, 2s. 3d.
 Vol. II. [Cd. 6246.] Price 1s. 9d.; by post, 2s. 1d.
- Report of Advisory Committee on distribution of Exchequer Grants to Universities, &c. [Cd. 6140.] Price 1½d.; by post, 2d. Second Report of ditto. [Cd. 6617.] Price 1d.; by post, 1½d. Third Report of ditto. [Cd. 6869.] Price 1½d.; by post, 2d.
- How to become a Teacher in a Public Elementary School. Price 4d.; by post, 5d.
- Regulations for the Training of Teachers for Elementary Schools, 1913 [Cd. 6795.] Price 1d.; by post, 8d.
- Regulations for the Training of Teachers of Domestic Subjects. [Cd. 4603.] Price 1½d.; by post, 2d.
- Regulations for Training of Teachers for Secondary Schools. [Cd. 6912.] Price 1d.; by post, 1½d.
- List of Training Colleges, &c. (Elementary), showing Accommodation, Fees, Courses, and Examinations. Price 3d.; by post, 4d.
- Syllabus of Preliminary Examination for Certificate, 1914. Price 1d.; by post, 1½d.
- Syllabuses of the Certificate Examinations, 1913, 1914. Price 1d. each; by post, 1½d.
- Examination Papers set at the Preliminary Examination for the Elementary School Teachers' Certificate, 1913. Price 6d.; by post, 7d.
- Examination Papers set at the Certificate Examination, 1912. Price 6d.; by post, 7d.
- List of Persons who have passed the Preliminary Examination for the Elementary School Teachers' Certificate, 1913. [List 163, 1913.] Price 6d.; by post, 7½d.
- List of Training College Students who completed training on 31st July 1912, and qualified for examination for recognition as Certificated Teachers, 1912. [List 19.] Price 6d.; by post, 9d.
- List of Persons who have passed the Certificate Examination of the Board of Education for Teachers in Elementary Schools, 1912. [List 24.] Price 6d.; by post, 7d.

Secondary Schools and Pupil-Teacher Centres.

- Regulations for Secondary Schools, from 1st August 1909. England [Cd. 4691]; Wales [Cd. 4696.] Price 2d.; by post, 3d.
- Regulations for the Preliminary Education of Elementary School Teachers, 1909. England [Cd. 4628]; Wales [Cd. 4656.] Price 3d.; by post, 4d. (*Superseded by this issue.*)
- List of Efficient Secondary Schools and recognised Pupil-Teacher Centres in England, 1911-12. [List 60.] Price 9d.; by post, 11d.
- Building Regulations for Secondary Schools and Pupil-Teacher Centres. [Cd. 3865.] Price 2d.; by post, 2½d.
- Report for 1912 under Welsh Intermediate Education Act. (H.C. 155; 1913.) Price 1½d.; by post, 2d.
- Report of Consultative Committee on Examinations in Secondary Schools, 1911. [Cd. 6004.] Price 2s. 6d.; by post, 2s. 11d.
- Report of Consultative Committee on Practical Work in Secondary Schools. [Cd. 6849.] Price 1s. 9d.; by post, 2s. 1d.
- Teaching of English in Secondary Schools (Circular 753). Price 2d.; by post, 2½d.
- Pronunciation of Latin. [Circular 791.] Price 1d.; by post, 1½d.
- Teaching of Latin in Secondary Schools. [Circular 574, for England; or Wales, Circular 1.] Price 1d.; by post, 1½d.
- Teaching of History in Secondary Schools. [Circular 599.] Price 1d.; by post, 1½d.
- Teaching of Housecraft; Interim Memorandum. Price 4d.; by post, 5½d.
- Teaching of Modern Languages. [Circular 797.] Price 3d.; by post, 4d.
- Teaching of Needlework. [Circular 719.] Price 1d.; by post, 1½d.
- Memorandum on Physical Training in Secondary Schools. [Circular 779 for England; or Wales, Circular 40.] Price 2d.; by post, 2½d.

Technology, Evening Schools, and Higher Education in Science and Art.

- Regulations for Technical Schools, Schools of Art and other Forms of Provision of Further Education, from 1st August 1913. [Cd. 6925.] Price 2d.; by post, 3d.
- Regulations for Junior Technical Schools. [Cd. 6919.] Price 1d.; by post, 1½d.
- Regulations for University Tutorial Classes. [Cd. 6866.] Price ½d.; by post, 1d.
- Regulations for Schools of Nautical Training. [Cd. 6868.] Price ½d.; by post, 1d.
- Regulations and Syllabuses for Examinations in Science and Technology, 1913. Price 3d.; by post, 4d.
- Regulations for Examinations in Art, 1913. (Rules 110). Price 2d.; by post, 3d.
- Regulations for Scholarships, &c. in Art, 1913. Price 1d.; by post 1½d.
- Rules as to Certificates for Teachers of Art (Rules 109). Price 1d.; by post 1½d.
- List of Day Technical Courses and of Schools of Art, 1910-11. [List 111.] Price 3d.; by post, 4d.
- Prospectus of the Royal College of Art, 1912-13. Price 3d.; by post, 4d.

BOARD OF EDUCATION.

**REGULATIONS FOR THE PRELIMINARY
EDUCATION OF ELEMENTARY SCHOOL
TEACHERS.**

- (1.) Pupil-Teacher Regulations.
- (2.) Bursary Regulations.
- (3.) Student-Teacher Regulations.

*(In force from 1st August 1913, in England, excluding
Wales and Monmouthshire.)*

Presented to Parliament by Command of His Majesty.



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BOARD OF EDUCATION.

SYLLABUS OF THE PRELIMINARY
EXAMINATION FOR THE ELE-
MENTARY SCHOOL TEACHERS'
CERTIFICATE, 1915.

PART I. DECEMBER, 1914.

PART II. MARCH, 1915.



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SYLLABUS OF THE PRELIMINARY EXAMINATION
FOR THE ELEMENTARY SCHOOL TEACHERS'
CERTIFICATE, 1915.

REGULATIONS.

(1)—(a) The Board hold an annual Examination, called the Preliminary Examination for the Elementary School Teachers' Certificate, to which persons are admitted on complying with the prescribed conditions.

(b) The Examination is divided into two Parts. Part I. is held shortly before Christmas and Part II. about Easter. Part I. is a qualifying test and the marks obtained in it are not counted towards the result of Part II.

(c) Persons who are employed in Schools in Scotland, or are living in Scotland at the time of Part I. of the Examination, are, as a rule, not admitted.

(d) Persons who are recognised by the Board as Student-Teachers will not be admitted.

(2)—(a) Part I. of the Preliminary Examination for the Certificate, 1915, will be held on Thursday and Friday, December 10th and 11th, 1914, at Secondary Schools, Pupil-Teacher Centres, and such other places as may be necessary.

(b) Part II. of the Preliminary Examination for the Certificate, 1915, will be held on Tuesday, March 23rd, 1915, and the three following days, at Secondary Schools, Pupil-Teacher Centres, and such other places as may be necessary.

(c) Copies of the Syllabus may be obtained on application to the Secretary, Board of Education, Whitehall, London, S.W.

(d) Specimen copies of the Syllabus are sent by the Board to all Local Education Authorities. On application being made by a Local Education Authority, a stock of the Syllabus will be supplied to them for distribution to candidates.

(3)—(a) Candidates must be persons who will be over 16 years of age on July 31st, 1914.*

(b) Candidates who at the time of Part I. of the Examination will be receiving instruction as pupils in a recognised Secondary School or in a Pupil-Teacher Centre recognised under Article 11 of the Regulations for the Preliminary Education of Elementary School Teachers, will be regarded as "Internal" candidates. Other candidates will be regarded as "External" candidates.

(4) In order to pass in the Examination as a whole, Candidates must pass in Part I. and in Part II. separately. No candidate can enter for Part II. unless he has passed Part I. Candidates, however, who have passed Part I. of the Preliminary Examination for the Certificate in a previous year will not be required to take Part I. again as a condition of admission to Part II.

(5) Application for the admission of Internal candidates to the Examination, whether to Part I. or direct to Part II., must be made by the Correspondent of the Secondary School or Pupil-Teacher Centre in which the candidates are under instruction, and must reach the Board on or before November 2nd, 1914. Applications received by the Board after November 2nd will be entertained only in exceptional circumstances, and in such cases a fee of 1*l*. for each candidate will be required.

* For the purpose of these Regulations a person is considered to complete each year of age immediately on the commencement of a birthday. Thus a person born on July 31st, 1896, is over 16 years of age on July 31st, 1914, and is qualified, therefore, for admission to the Examination; but a person born on August 1st, 1896, is not.

(6)—(a) Local Education Authorities for Part II. of the Education Act, 1902, are responsible for making the local arrangements for the examination of External candidates in their area. All communications regarding the arrangements for the examination of External candidates should be addressed to the Local Education Authority and not to the Board of Education.

(b) Application for permission for an External candidate to attend the Examination must be made to the Local Education Authority for the County or County Borough in which the candidate is employed or (if not in employment) resides. Candidates employed or residing in a town which is not a County Borough should apply to the Authority for the County in which the town is situated.

(c) All External candidates taking the Examination, whether they are taking Part I. or are proceeding direct to Part II., are required to pay an entrance fee. The fee will be 5s. for candidates whose applications reach the Local Education Authority on or before October 1st, 1914. Candidates whose applications reach the Authority after October 1st, but not later than November 2nd, will be required to pay an entrance fee of 10s. Applications received by the Authority after November 2nd will be entertained only in exceptional circumstances, and any candidate so applying will be required to pay a fee of 1l.

(7)—(a) Candidates who pass Part I. in December 1914, are not required to apply for permission to attend Part II. in March 1915. A Form conveying the Board's permission will be sent in due course.

(b) Candidates who have passed Part I. of the Preliminary Examination for the Certificate in a previous year and are therefore qualified for admission to Part II. without taking Part I., must, like all other candidates, comply with the requirements of Regulations (5) and (6). A Form conveying the Board's permission to attend Part II. will then be sent in due course.

(8)—(a) In Part I. all candidates will be examined in Reading, Composition, Penmanship, Arithmetic, Drawing, and Theory of Music. Girls will also be examined in Needlework.

(b) In the case of Internal candidates a Certificate of Proficiency in Reading, given by the Head Master or Mistress of their Secondary School or Pupil-Teacher Centre, will be accepted in place of a test by the Inspector in that subject.

External candidates will be examined in Reading by the Inspector either on the day of the Examination or at some time during the four weeks preceding the written examination.

(c) In Part II. all candidates will be examined in English Language and Literature, History, and Geography. Candidates must also take one or more of the following Optional Subjects:—Elementary Mathematics, Elementary Science, Latin, Greek, French, German, Welsh, Hebrew. Not more than two Languages may be taken.

(9)—(a) All candidates who (i) satisfy the requirements as to Reading, (ii) obtain a satisfactory aggregate of marks in Part I. as a whole, and (iii) reach a certain standard in Arithmetic and Composition, will be considered to have passed Part I.

(b) All candidates who obtain a satisfactory aggregate of marks in Part II. will be considered to have passed Part II. and the Examination as a whole. The marks for one Optional Subject only are included in this aggregate and a candidate cannot gain additional marks by taking a second Optional Subject. If a candidate takes more than one Optional Subject, the marks for the one in which he does best are included in the aggregate.

(10) Candidates who pass the Examination as a whole may obtain distinction in Part II. in any one or more of the three Compulsory

Subjects and of four Optional Subjects. Distinctions are not awarded for the Subjects included in Part I.

(11)—(a) Candidates will be informed of the result of their examination in Part I. and in Part II.

(b) As soon as possible after the announcement to candidates of the result of their examination in Part II., there will be published a Result List of the Examination as a whole, containing the names of candidates who have passed Part II., and have, therefore, passed the Examination as a whole, in alphabetical order without classification. The List will show the Subjects in which candidates obtained distinction.

(12) Candidates who pass the Examination as a whole will be regarded as qualified, so far as examination requirements are concerned, for recognition as Uncertificated Teachers under Schedule I.C. of the Code and for admission to a Training College.

(13) The Papers set at the last Examination are published separately in pamphlet form, and may be obtained from Messrs. Wyman and Sons, Ltd., Fetter Lane, London, E.C., price 6d.; by post, 7d. The Result Lists of previous Examinations also may be obtained from Messrs. Wyman, price 6d. each; by post, 7d.

DETAILED SYLLABUS OF THE SUBJECTS OF THE EXAMINATION.

Defective spelling or handwriting will be taken into account in estimating the value of a candidate's work.

The use of rulers is allowed for the Geography, Mathematics, and Science Papers in Part II. No credit will be given for the use of them in any other Paper. The use of stencils is forbidden.

PART I.

I.—Reading:—

To read with clear enunciation, ease, and intelligence, from a work of a standard prose author and a work of a standard poet.

II.—Composition.

III.—Penmanship:—

To set copies in large and small hand.

IV.—Arithmetic:—

Excluding Troy Weight, Apothecaries' Weight, Practice, Ratio, Proportion except by the unitary or fractional method, Stocks and Shares, True Discount, Foreign Exchange, Scales of Notation, Recurring Decimals and complicated fractions, and Square and Cube Roots.

Candidates may be asked to find the square or cube roots of numbers that can readily be expressed as the product of the squares or cubes of small factors.

The metric system will only be applied to measuring length, area and volume.

Questions may be set on the mensuration of rectangular surfaces and solids, triangles, circles, cones, and cylinders.

The use of algebraical symbols will be permitted.

As a rule, the questions set will not involve long operations or complicated numbers, and the answers to money sums will not be required beyond the nearest penny.

The Papers will be sufficiently long to allow candidates some latitude in the selection of questions, but no limit will be placed on the number of questions which may be attempted.

V.—Drawing:—

Candidates will be required to undergo a test in (1) or (2) or both.

(1) Drawing of Natural Objects.

Candidates will be required to draw from memory on a half imperial sheet of paper a natural object (*see below*), as seen from various points of view. The drawings may be executed with any medium, and should be as complete as the candidate is able to make them. No ruling, measuring, tracing, or other mechanical aid whatever is allowed.

Candidates should have gone through a graduated series of exercises in drawing from plants, foliage, flowers, and other natural objects, for the purpose of acquiring (a) a general knowledge of organic form, and a knowledge of the form, structure, colour, and other characteristics of natural objects from direct study of them, together with an appreciation of their beauty, and (b) the power of drawing freely and accurately from natural objects, not only while the objects are in sight, but also from memory and knowledge.

(2) Drawing of Handmade and Artificial Objects.

Candidates will be required to draw from memory on a half imperial sheet of paper, white or toned, a familiar object (*see below*).

as seen from various points of view, or a group of objects, as seen from a particular point. The drawings may be executed with any medium, and should be as complete as the candidate is able to make them. No ruling, measuring, or other mechanical aid whatever is allowed.

Candidates should have gone through a graduated series of exercises in drawing from common things of simple form, for the purpose (a) of acquiring by direct study of objects a general knowledge of form, and a knowledge of the form, structure, and other characteristics of such things, as well as of the effect of perspective in modifying their appearance, and (b) of representing them accurately and intelligently, not only while the objects are in sight, but also from memory and knowledge.

The exercises should not be restricted to drawing in pencil on white paper. A wider range of study is advisable in all cases. It is suggested that this might be obtained by the use of such means as toned paper, charcoal, pastel, pen, brush, &c.

VI.—Theory of Music:—

Candidates will be expected to show a knowledge of both the Staff and Tonic Sol-fa Notations.

Marks will be deducted for indistinct as well as inaccurate notation.

Staff Notation.

All the major and minor scales and signatures. Diatonic and chromatic intervals. Easy transposition. The value of notes, dotted notes and rests. Bars and time signatures. Transposition of time. Syncopation. Knowledge of the child voice. Common musical terms. Translation of a short passage into Tonic Sol-fa Notation.

Tonic Sol-fa Notation.

The major and minor modes. Bridge notes and first removes of key. Chromatic names. Relative pitch of keys and notes. Diatonic and chromatic intervals. Pulses, measures. Pulse division in halves, quarters, thirds, &c. Syncopation. Compass of voices. Common musical terms. Translation of a short passage into Staff Notation.

VII.—Needlework (Girls only):—

Candidates will be expected to give evidence that they understand the cutting-out, making and mending of ordinary garments, including underclothing.

A wide choice of questions will be set, and candidates will be given an opportunity of obtaining credit for whatever practical knowledge they possess.

PART II.

A.—COMPULSORY SUBJECTS.

I.—English Language and Literature:—

(1) English Grammar.

(2) The elements of English Composition and Literature.

All candidates should have undertaken as wide a course as possible of general reading, which should include amongst other books some of Shakespeare's plays, an anthology of verse, and some of the chief works of the most famous English prose-writers. The Paper will contain a wide choice of questions, and will as far as possible be framed so as to give candidates an opportunity of obtaining credit for any private reading they have done.

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Candidates will be expected to write an Essay.

Opportunity will be given to show a knowledge of Welsh.

II.—History:—

The outlines of British History from the earliest times to the present day, including the main landmarks of European History as they directly affect British History.

A wide choice of questions will be given, and a candidate who has studied a considerable portion of the History should be able to answer the full number required.

Questions will be set having special reference to Welsh History.

III.—Geography:—

(1) The elements of Mathematical and Astronomical Geography, including the interpretation and drawing of maps and charts, and a knowledge of map projections in common use.

(2) Physical Geography: particularly leading facts about climate and rainfall; tides and currents; common materials forming the earth's crust; various types of land-relief, coastline and river features.

(3) Characteristics and distribution of the following vegetation zones:—tundras, coniferous forests, deciduous forests, prairies, steppe-lands, deserts, tropical forests.

The general distribution of plants, animals and man in relation to these natural regions. Areas of dense and scanty population as determined by land-configuration, climate, geographical position and productions.

(4) Geography of the British Isles:—

Physical Conditions.—General knowledge of the structure of the United Kingdom; influence of rock structure on topography.

Distribution of land forms; mountains, plateaux, escarpments, and plains.

General distribution of soils as determined by structure and topography. The river system in relation to topography.

Distribution of temperature and rainfall over the United Kingdom with the chief determining factors. Candidates will be expected to know the rainfall map of the United Kingdom, and to be able to insert the chief isothermal lines.

Distribution of mineral wealth; coal, iron, tin, copper, and other minerals.

Economic Geography.—Distribution of agricultural products and industries, as determined by the physical conditions, especially cereal, fruit, and pasture areas; textile industries; mining industries; iron and shipbuilding centres.

Distribution of population. Arteries of commerce, natural and artificial.

(5) A fairly advanced knowledge of Europe and of either North America or Asia, and of the Oceans which wash their shores.

North America should include both Greenland and the West Indies. The isthmus of Tehuantepec will be regarded as the southern boundary of the continent. Japan should be included in Asia.

The continents should be treated from the points of view indicated under the heading of "British Isles," but only with reference to the more important features of the topography and the leading political divisions. Attention should be directed throughout to the connection of physical geography with historical, political and economic geography.

Sketch maps may be required, and importance will be attached to the illustration of answers by simple maps, sections, and diagrams. Questions will be set having special reference to Wales.

B.—OPTIONAL SUBJECTS.

IV.—Elementary Mathematics:—

The Papers set will be sufficiently long to allow candidates some latitude in the selection of questions, and will permit, therefore, of latitude in the teaching schemes. Candidates will not be limited in the number of questions which they may attempt, nor will they be expected to answer the whole Paper.

Every candidate should be provided with a ruler, graduated in inches and tenths of an inch and in centimetres and millimetres, a small set square, a protractor, compasses furnished with a hard pencil point, and a hard pencil. Squared paper will be provided when needed.

As a rule, the questions set will not involve long operations or complicated numbers, and the answers to money sums will not be required beyond the nearest penny.

ARITHMETIC.—Excluding Troy Weight, Apothecaries' Weight, True Discount, Foreign Exchange, Scales of Notation, Recurring Decimals and Cube Roots.

Candidates may be asked to find the cube roots of numbers that can readily be expressed as the product of the cubes of small factors.

Candidates must understand the principles of the metric system, and should be able to decimalise money readily.

Questions on Stocks and Shares will be of a simple character and will not involve a knowledge of brokerage.

The use of algebraical symbols will be permitted.

ALGEBRA.—As far as and including simultaneous equations (one of which is linear) in two variables, L.C.M. and H.C.F. by means of factors. Problems leading to the types of equations specified.

GEOMETRY:—

(1) PRACTICAL.

Bisection of angles and of straight lines.

Construction of perpendiculars to straight lines.

Construction of an angle equal to a given angle.

Construction of parallels to a given straight line.

Simple cases of the construction from sufficient data of triangles and quadrilaterals.

Division of straight lines into a given number of equal parts or into parts in any given proportions.

Construction of a triangle equal in area to a given polygon.

Construction of tangents to a circle and of common tangents to two circles.

Simple cases of the construction of circles from sufficient data.

Construction of a fourth proportional to three given straight lines and a mean proportional to two given straight lines.

Construction of regular figures of 3, 4, 6, or 8 sides in or about a given circle.

Construction of a square equal in area to a given polygon.

(2) THEORETICAL.

Angles at a Point.

If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right angles; and the converse.

If two straight lines intersect, the vertically opposite angles are equal.

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Parallel Straight Lines.

When a straight line cuts two other straight lines, if

- (i) a pair of alternate angles are equal,
 - or (ii) a pair of corresponding angles are equal,
 - or (iii) a pair of interior angles on the same side of the cutting line are together equal to two right angles,
- then the two straight lines are parallel; and the converse.

Straight lines which are parallel to the same straight line are parallel to one another.

Triangles and Rectilinear Figures.

The sum of the angles of a triangle is equal to two right angles.

If the sides of a convex polygon are produced in order, the sum of the angles so formed is equal to four right angles.

If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles contained by those sides equal, the triangles are congruent.

If two triangles have two angles of the one equal to two angles of the other, each to each, and also one side of the one equal to the corresponding side of the other, the triangles are congruent.

If two sides of a triangle are equal, the angles opposite to these sides are equal; and the converse.

If two triangles have the three sides of the one equal to the three sides of the other, each to each, the triangles are congruent.

If two right-angled triangles have their hypotenuses equal, and one side of the one equal to one side of the other, the triangles are congruent.

If two sides of a triangle are unequal, the greater side has the greater angle opposite to it; and the converse.

Of all the straight lines that can be drawn to a given straight line from a given point outside it, the perpendicular is the shortest.

The opposite sides and angles of a parallelogram are equal, each diagonal bisects the parallelogram, and the diagonals bisect one another.

If there are three or more parallel straight lines, and the intercepts made by them on any straight line that cuts them are equal, then the corresponding intercepts on any other straight line that cuts them are also equal.

Areas.

Parallelograms on the same or equal bases and of the same altitude are equal in area.

Triangles on the same or equal bases and of the same altitude are equal in area.

Equal triangles on the same or equal bases are of the same altitude.

Illustrations and explanations of the geometrical theorems corresponding to the following algebraical identities:—

$$k(a + b + c + \dots) = ka + kb + kc + \dots,$$

$$(a + b)^2 = a^2 + 2ab + b^2,$$

$$(a - b)^2 = a^2 - 2ab + b^2,$$

$$a^2 - b^2 = (a + b)(a - b).$$

The square on a side of a triangle is greater than, equal to, or less than the sum of the squares on the other two sides, according as the angle contained by those sides is obtuse, right, or acute. The differences in the cases of inequality is twice the rectangle contained by one of the two sides and the projection on it of the other.

Loci.

The locus of a point which is equidistant from two fixed points is the perpendicular bisector of the straight line joining the two fixed points.

The locus of a point which is equidistant from two intersecting straight lines consists of the pair of straight lines which bisect the angles between the two given lines.

The Circle.

A straight line drawn from the centre of a circle to bisect a chord which is not a diameter, is at right angles to the chord; conversely, the perpendicular to a chord from the centre bisects the chord.

There is one circle, and one only, which passes through three given points not in a straight line.

In equal circles (or, in the same circle) (i) if two arcs subtend equal angles at the centres, they are equal; (ii) conversely, if two arcs are equal, they subtend equal angles at the centre.

In equal circles (or, in the same circle) (i) if two chords are equal, they cut off equal arcs; (ii) conversely, if two arcs are equal, the chords of the arcs are equal.

Equal chords of a circle are equidistant from the centre; and the converse.

The tangent at any point of a circle and the radius through the point are perpendicular to one another.

If two circles touch, the point of contact lies on the straight line through the centres.

The angle which an arc of a circle subtends at the centre is double that which it subtends at any point on the remaining part of the circumference.

Angles in the same segment of a circle are equal; and if the line joining two points subtends equal angles at two other points on the same side of it, the four points lie on a circle.

The angle in a semicircle is a right angle; the angle in a segment greater than a semicircle is less than a right angle; and the angle in a segment less than a semicircle is greater than a right angle.

The opposite angles of any quadrilateral inscribed in a circle are supplementary; and the converse.

If a straight line touch a circle, and from the point of contact a chord be drawn, the angles which this chord makes with the tangent are equal to the angles in the alternate segments.

If two chords of a circle intersect either inside or outside the circle the rectangle contained by the parts of the one is equal to the rectangle contained by the parts of the other.

Proportion: Similar Triangles.

If a straight line is drawn parallel to one side of a triangle, the other two sides are divided proportionally; and the converse.

If two triangles are equiangular their corresponding sides are proportional; and the converse.

If two triangles have one angle of the one equal to one angle of the other and the sides about these equal angles proportional, the triangles are similar.

The internal bisector of an angle of a triangle divides the opposite side internally in the ratio of the sides containing the angle, and likewise the external bisector externally.

The ratio of the areas of similar triangles is equal to the ratio of the squares on corresponding sides.

Elementary Solids.

Candidates will be expected to be acquainted with the forms and simple properties of the cube, rectangular block, sphere, cylinder, and cone.

NOTE.—Whenever propositions in the first two groups (Angles at a Point and Parallel Straight Lines) are set, alternative questions will also be set.

V.—**Elementary Science :—**

Candidates must show a practical knowledge of the subjects taken; they should have performed the greater part of the experimental and observational work themselves, and the questions will be framed on this supposition.

The experiments in the following Syllabuses should be closely connected, and should be made with some definite object in view. The instruction should aim at creating in the students an interest in the changes and operations which they see going on round them, and also a desire to understand them. For this purpose the materials used should wherever possible be those met with in common life.

Candidates will be expected in the Examination to be able to apply their knowledge to problems of everyday life; their exercises should therefore be devised to attain that end and to induce them to try to explain *for themselves* the various facts and changes which they see, and which should themselves often be made the starting point of their studies. The Syllabuses are not exhaustive and the various applications have as a rule been purposely omitted; they should, however, be supplied by both *students* and teachers.

Candidates should bring with them to the Examination a ruler, graduated in inches and tenths of an inch and in centimetres and millimetres, a small set square, a protractor, compasses furnished with a hard pencil point, and a hard pencil.

Syllabus.

INTRODUCTORY SECTION.

Lengths; areas; volumes; weights; British and metric systems; simple lever; balance; density of solids and liquids; Principle of Archimedes; specific gravity; flotation, hydrometer, and lactometer; U tube; barometer.

Measurement of expansion by heat of solids, liquids, and gases. Convection currents in both liquids, and gases. Applications to hot water circulation systems, and ventilation. Thermometers. Experiments on melting and solidifying points, on boiling points and on evaporation and condensation with the following substances: paraffin wax, butter, margarine, water, salt solution, methylated spirits; and with fat and olive oil in connection with cooking.

Measurement of heat; specific and latent heats, treated very simply.

Study of the effect of heat and acids on such common substances as chalk, washing soda, bicarbonate of soda, iron, copper, lead, the burning of starch, sugar, animal and vegetable matters; the rusting of iron, and the burning of phosphorus and magnesium. These experiments should lead to a knowledge of the composition of chalk, air, and water, and should have shown that carbon, iron, copper, &c., unite with oxygen to form oxides, and that food stuffs, such as starch and sugar, contain both carbon and hydrogen.

Solubility of solids and liquids in hot and cold water, in alcohol, benzine, and other solvents, *e.g.*, salt, sugar, starch, oils, grease, resin, &c.

Hard and soft waters; soap solution; natural waters; impurities in water.

Experiments to find the amount of water contained in such substances as milk, vegetables, meat, soap.

Many of the above changes should be studied quantitatively, *e.g.*, the increase or decrease in weight; the volume of gas evolved from known weights of substances.

Candidates may also select one of the following more advanced Sections, A, B, or C, for which additional marks will be given.

Candidates for distinction will be required to take one of these Sections in addition to the Introductory Section.

A.—CHEMISTRY.

In addition to the paragraph on Chemistry in the Introductory Section, the following:—

Boyle's Law. Further study of chemical change.

The following reactions should be studied and a knowledge of the products will be expected:—

Action of strong sulphuric acid on salt and nitre.

Action of hydrochloric acid on red lead and manganese dioxide.

Action of strong sulphuric acid on copper.

Study of the formation of salts. Preparation properties and composition of ammonia. Properties of caustic soda and potash. Alkalis and acids contrasted. Quantitative experiments in neutralisation. Acids, bases, and salts. Solution, solubility curves.

Simple practical study of oil, fat, albumen, starch, and sugar.

B.—PHYSICS.

Candidates will not be expected to cover the whole of this Section.

The subject matter contained in the paragraphs on Measurement and Heat in the Introductory Section.

Boyle's Law. Measurement of force; spring balance or dynamometer; parallel forces; centre of gravity; parallelogram and triangle of forces; inclined plane; simple pendulum.

Transference of heat; quantity of heat; specific and latent heats; dew point.

Propagation of light; shadows; photometry; laws of reflection and refraction, with reference to plane and spherical surfaces; prism and spectrum.

Properties of magnets; magnetic induction; magnetic lines of force; use of magnetometer; Earth as a magnet; dip and declination.

Development of electricity by various means; electroscope, Leyden jar; effects of electric current; electro-magnets; electro-magnetic induction; the tangent galvanometer.

C.—BOTANY.

Seeds and seedlings.—Structure of seeds of bean and maize. Germination. Effect of light and heat upon growth. Comparison of seedlings at different stages grown both in sawdust and in garden soil. Measurements of height and dry weight; plotting of results in curves from observations taken over several weeks.

The green leaf.—The structure of the leaf. Stomata. Veins. Connection of leaf with the stem. Continuity of conducting tissues. Transpiration. The function of the leaf in nutrition. Starch; chlorophyll. Extraction of chlorophyll with alcohol. Occurrence of starch in the leaf; experiments to show that light and carbon dioxide are necessary for its formation. The function of chlorophyll. Formation of sugar. Sensitiveness of the leaf to light.

Stem and root.—General morphology. Paths taken by food substances. Plant foods in soils. Root tip; root hairs; osmosis and root pressure. Response to external stimuli, light, contact, and gravity.

Buds.—Detailed study of the structure of the buds of sycamore and horse-chestnut. Arrangement of scale leaves and foliage leaves. Time of formation of the buds.

Structure of a few typical flowers.—The functions of the various parts. Pollination and fertilization. Dispersal of seed.

Study of common plants.—The structure of the sweet pea and crocus, so far as they can be examined with the naked eye or a pocket lens; the development of the seedlings of the sweet pea into the adult plant; the life history of the crocus during one year. The study of the following plants:—Ivy, potato, blue-bell (*scilla*), primrose, buttercup, dandelion, celandine (*runcunculus ficaria*), gorse, violet, pansy, wheat or oat, orchis.

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Attention should be paid to the special adaptations for protection, storage of food, pollination, and dispersal, the kind of locality in which each plant is usually found and the details of structure which adapt it to its surroundings. Technical descriptions will not be asked for.

The identification of common trees, such as oak, ash, beech, sycamore, horse-chestnut, elm, poplar, alder, willow, birch, and hazel, at various seasons and by means of various parts and organs, such as buds, bark, leaves, &c.

The struggle for light and air studied in the field. Comparison of creeping plants, rosette-forming plants, grass-like plants, shrubs, trees, and climbing plants. Form and arrangement of leaves. Storage of food. Annuals, biennials, perennials.

The Course is intended to serve as a training in scientific observation and experiment. It includes only such topics as can be dealt with experimentally or by the examination of specimens. All the work, therefore, should be done practically. Mere book work is useless.

The Course affords ample opportunity for outdoor observations. Arrangements should be made for field work and excursions, and candidates should be encouraged to make observations for themselves out of doors in connection with the lessons given.

VI.—Languages:—

One or two of the following:—Latin, Greek, French, German, Welsh, Hebrew.

No set books are prescribed for study. The passages for translation into English will be taken both from prose-writers and from poets.

Passages for translation from English into the Language, and in the case of modern Languages, exercises in free composition will be set.

A sound knowledge of simple accidence and syntax will be required.

For Official Use.

BOARD OF EDUCATION.

SYLLABUS OF
THE CERTIFICATE EXAMINATION OF
THE BOARD OF EDUCATION FOR
TEACHERS IN ELEMENTARY
SCHOOLS, 1915.



LONDON:

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1913.

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SYLLABUS OF THE CERTIFICATE EXAMINATION OF THE BOARD OF EDUCATION FOR TEACHERS IN ELEMENTARY SCHOOLS, 1915.

REGULATIONS.

N.B.—Alterations are indicated by a marginal line.

1.—(a) The Board hold an annual Examination, called the Certificate Examination, to which candidates (other than students in Training Colleges) for recognition as Certificated Teachers in Elementary Schools are admitted on complying with the prescribed conditions.

(b) Persons who are employed in Schools in Scotland, or are living in Scotland at the time of the Examination, are not admitted.

(c) Persons who have passed the Certificate Examination in a previous year cannot be admitted to the Examination, except in so far as they may be admitted to take Hygiene and Physical Training as a separate subject in accordance with Regulations 10 (c) and (d) below.

2.—(a) The Certificate Examination, 1915, will be held on November 29th, 1915, and the four following days at such places as may be necessary.

(b) Copies of the Syllabus may be obtained on application to the Secretary, Board of Education, Whitehall, London, S.W.

(c) Specimen copies of the Syllabus are sent by the Board to all Local Education Authorities. On application being made by a Local Education Authority, a stock of the Syllabus will be supplied to them for distribution to candidates.

3.—(a) A candidate

(i) must be over 20 years of age on the 31st July, 1915;

(ii) must, as a rule, have passed, before 31st December, 1913, an Examination qualifying for recognition as an Uncertificated Teacher under Schedule I. C. of the Code;

(iii) must, as a rule, have been recognised by the Board as an Uncertificated Teacher under Schedule I. C. of the Code, and have been employed in that capacity in Elementary Schools in England or Wales under Government Inspection for such a period as the Board may accept as sufficient. The period which will be accepted for this purpose will be either: (a) a period of a year's full-time service, if completed within twenty-four consecutive months, or (b) such period of half-time service, covering not less than two years in all, as the Board may approve in a particular case;

(iv) must, if he has been a Pupil-Teacher, have completed the period for which he was recognised as such not later than 31st July, 1913.

(b) Conditions (ii) and (iii) do not apply to persons who have been recognised for not less than three years on the staff of Certified Schools for Blind, Deaf, Defective, or Epileptic Children.

4.—(a) Local Education Authorities for Part II. of the Education Act, 1902, are responsible for making the local arrangements for the examination of candidates in their area, that is, for supplying them with a Form of

Application, for receiving the Form from them when completed and transmitting it to the Board, and for deciding at what places there shall be Examination Centres and at what Centre each candidate shall attend. All communications regarding the arrangements for the Examination should be addressed to the Local Education Authority and not to the Board of Education.

(b) Application for permission to attend the Examination (either as a whole, or, in the case of Certificated Teachers, for the purpose of taking Hygiene and Physical Training only) must be made on the prescribed Form, copies of which should be obtained from the Local Education Authority for the County or County Borough in which the candidate is employed or (if not in employment) resides. Candidates employed or residing in a town which is not a County Borough should apply to the Authority for the County in which the town is situated.

(c)—(i) All candidates taking the Examination as a whole are required to pay an entrance fee. The fee will be 10s. for all candidates whose applications reach the Local Education Authority on the prescribed Form not later than the 1st September, 1915. Candidates whose applications on the prescribed Form reach the Local Education Authority after September 1st but not later than October 1st will be required to pay an entrance fee of 1*l*. Applications which reach the Authority after October 1st will be entertained only in exceptional circumstances, and any candidate so applying will be required to pay a fee of 2*l*. No fee should be forwarded with the Form of Application. Instructions as to how the required fee is to be paid will be sent with the Form admitting candidates to the Examination.

(ii) Candidates taking Hygiene and Physical Training as a separate subject will not be required to pay an entrance fee, but their applications on the prescribed Form for permission to attend the Examination should reach the Local Education Authority not later than 1st September, 1915.

(d) As the procuring of the information required for the purpose of filling up the Form of application may cause delay, candidates should obtain the Form in good time.

5.—(a) Before a candidate can be recognised as a Certificated Teacher, he must satisfy the Board as to his age and physical capacity in the manner prescribed by the Elementary School Teachers Superannuation Rules, 1899.

(b) A Registrar's Certificate of Birth must accompany the candidate's application for admission to the Examination as a whole.

(c) All candidates who pass the Examination as a whole must be medically examined by one of the Medical Officers nominated by the Board for the purpose. Instructions will be sent to each successful candidate, together with a list of the Medical Officers. Candidates will be required to select one of the doctors on the list and to arrange for their examination by the one selected between the date of the issue of the results and the 30th April, 1916. The list contains the names of some Women Doctors. The fee for the examination, which is 10s. 6*d.*, must be paid by the candidate. The doctor will forward the report of the examination direct to the Board.

6. The following subjects are included in the Examination :—

SECTION A.—Reading and Practical Teaching.

GROUP I.

SECTION B.—Principles of Teaching.

„ C.—Music.

„ D.—Drawing.

„ E.—Needlework (for Women only).

} Compulsory.

GROUP II.

SECTION F.—English Language, Literature, and Composition.

" G.—History.

" H.—Geography.

} Compulsory.

GROUP III.

SECTION I.—Elementary Mathematics (including Arithmetic).

" J.—Elementary Science.

GROUP IV. (OPTIONAL).

SECTION K.—A Language other than English approved for the purpose by the Board.

SECTION L.—A Language other than English approved for the purpose by the Board.

SECTION M.—Hygiene and Physical Training (*see* Regulation 10).

7. Candidates who have been employed in Public Elementary Schools, Certified Efficient Schools, or Certified Schools for Blind, Deaf, Defective, or Epileptic Children in some recognised capacity for not less than one year during the two years immediately preceding the Examination, and have not been reported on unfavourably by His Majesty's Inspector in Reading and Practical Teaching, will not be tested in these subjects. Such candidates will be considered to have complied with the requirements of Section A. Other Candidates will be tested in Reading and Teaching by the Inspector; the necessary instructions will be sent to them when they are admitted to the Examination.

8. All candidates who comply with the requirements of Section A and obtain satisfactory aggregates of marks in each of the Groups I., II., and III., and in these three Groups combined, will be considered to have passed the Examination.

9. Candidates will be informed individually of the result of their examination. As soon as possible after the Examination, a general Result List will be published, in which the names of candidates who have passed the Examination will be arranged in alphabetical order without classification. Appropriate marks will be placed in the Result List against the names of candidates who obtain distinction in Section B, C, D, F, G, H, I, J, K, L, or M, and also against the names of candidates who pass in Section K, L, or M, without obtaining distinction.

10.—(a) No candidate will be eligible for examination by the Board in Hygiene and Physical Training unless he is shown to the satisfaction of the Board to have duly attended an approved Course of Physical Training at some time during the period between August 1st, 1913, and November 30th, 1915. The following conditions must be satisfied in the case of any Course which is proposed for approval for this purpose:—

- (1) The Course must be conducted by a teacher fully qualified to interpret the principles of the Swedish system of Physical Exercises as set out in the Board's Syllabus.
- (2) The Course must include not less than 40 hours' instruction, and must (unless alternative arrangements are specially approved by the Board) extend over a period of not less than six months.
- (3) Special application for the approval of the Course for the purpose of this Regulation must be made to the Board not later than 1st January, 1915, whether or not recognition of the Course is also desired under the Regulations for Technical Schools, &c. If such recognition is desired it should be stated on the application.

(b) Candidates will be tested partly by a written examination in Hygiene and the Theory of Physical Exercises, which will be held with the main part of the examination in December, and partly by a practical test in Physical Exercises, which will be conducted by an Inspector of the Board, as a rule, at the class in which the candidate is receiving instruction.

(c) The Board are prepared to admit to examination in Hygiene and Physical Training taken as a separate subject all teachers recognised as Certificated Teachers or qualified for such recognition, with the following exceptions:—(a) Teachers who have already passed in Hygiene and Physical Training as an optional subject in the Certificate Examination; (b) Teachers admitted to a Training College in 1908 or a later year whose approved course included Hygiene and Physical Training, and who were examined in those subjects.

(d) The provisions of Regulation 10(a) and (b) apply to candidates taking Hygiene and Physical Training as a separate subject.

(e) The Certificates of Teachers who pass with or without distinction in Hygiene and Physical Training taken as a separate subject will be endorsed accordingly.

11. (a) Candidates who pass the Examination as a whole, and who also satisfy the Board within the period stated in paragraph 5 (c) above as to their age and physical capacity in the manner prescribed by the Elementary School Teachers Superannuation Rules, 1899, will under Schedule I. A. of the Code be recognised as Certificated Teachers from April 1st, 1916. Each candidate who passes the Examination will be informed whether he is entitled to recognition as a Certificated Teacher after the Board have considered the report of the Medical Officer (*see* paragraph 5 (c) above).

(b) A Teacher who is qualified for recognition as a Certificated Teacher under Schedule I. A. of the Code, with the exception that he has failed to satisfy the Board in the manner prescribed by the Elementary School Teachers Superannuation Rules, 1899, of his physical capacity, may, if the Board think fit, be given the status and position of a Certificated Teacher for the purposes of Articles 9 and 12 of the Code, but not for the purposes of the Elementary School Teachers (Superannuation) Act, 1898.

12. The Papers set in the Examination will be so framed that candidates having any real knowledge of the subject will be able to obtain a fair proportion of marks. A certain number of harder questions will be included in order to give advantage to candidates who deserve to obtain distinction.

13. Where special arrangements approved by the Board have been made by a University for the instruction and examination of candidates for recognition as Certificated Teachers in Elementary Schools, the Board may accept a Certificate granted by the University instead of success in the corresponding subjects at the Certificate Examination. Candidates who desire to offer University Certificates in place of subjects included in the Certificate Examination, 1915, must make application before 1st January, 1915, on a special Form which will be supplied by the Board. Such candidates will not be admitted to the Certificate Examination, 1915, unless they have obtained their University Certificates in all the subjects in question.

14. The Papers set at the last Certificate Examination are published separately in pamphlet form and may be obtained from Messrs. Wyman & Sons, Ltd., Fetter Lane, E.C., price 6d. (by post 7d.). The Result Lists of previous Examinations also may be obtained from Messrs. Wyman, price 6d. each. (by post 7d.).

DETAILED SYLLABUS OF THE SUBJECTS OF THE EXAMINATION.

Any Paper may contain questions on the method of teaching the subject to which it relates.

Defective spelling or handwriting will be taken into account in estimating the value of a candidate's work.

SECTION A.—READING AND PRACTICAL TEACHING:—

(For certain candidates only; see Regulation 7.)

READING:—

Reading aloud with ease and clear enunciation.

Candidates will be expected to read passages from two books selected by them from among the books prescribed for general reading in Section F. The Inspector will hear candidates read from these books, and also at his discretion from any other book.

PRACTICAL TEACHING:—

A lesson to a class in the presence of the Inspector. The lesson may be in any compulsory subject included in the Syllabus, at the discretion of the Inspector.

SECTION B.—THE PRINCIPLES OF TEACHING:—

I.—i. Successive stages of child life from infancy to adolescence, their characteristics, physical and mental: interests and activities natural to each stage: connexion of these with attention and with the means of securing it.

Backward and precocious children and the means of dealing with them. Fatigue and the usual signs of it. Other common and avoidable causes of inattention.

ii. Types of school buildings and their connexion with school organisation and health. Conditions of healthy work in school: cleanliness and the means of securing it: dangers arising from infection and the means of avoiding them. Detection of fatigue, distress, mental deficiency: methods of dealing with them.

Forms of organisation: classification and promotion of scholars: the proper use of the school staff.

iii. The problem of discipline at various stages of school life: discipline and order: the right treatment of younger scholars.

The formation of good habits. The value of a good school tradition: the cultivation of corporate life.

School institutions: the library: games: reading circles, etc.

II.—i. Subjects of the curriculum and reasons for their inclusion: their relative importance at different periods of school life: possible variations to meet different circumstances: the importance of securing connexion and continuity.

ii. Means of learning at the disposal of the child at various ages: opportunities for using them both freely and under guidance: imitation; observation: the use of the senses: forms of expression and their importance.

iii. Methods of teaching in general: the characteristics of the collective lesson: possibility of individual teaching and of teaching classes in sections: place of exposition and of catechetical teaching: framing questions and dealing with answers: method of dealing with mistakes, oral and written: methods of encouraging private study and self-help in scholars: variations in methods to suit different stages of school life.

iv. Schemes of work : preparation of single lessons and series of lessons : rough or working notes : various aims and methods of revision : the arrangement of the time-table.

III.—METHODS OF TEACHING THE FOLLOWING:—

i. Language: means of securing clear articulation and accurate hearing: use of stories: continuous speech and written composition: reading aloud: silent reading: training in the use of books: means of securing correct spelling: place of grammar: cultivation through prose and poetry of a taste for literature.

ii. Number and elementary mathematics: methods and apparatus: practical instruction and its relation to handwork: means of securing accuracy.

iii. Manual occupations, including drawing and writing: their educational value and right use in connexion with other subjects: methods and materials at various stages: needlework.

iv. Observation lessons and nature study: place of investigation and of information: indoor and outdoor work: selection of material for schools differently situated: connexion with gardening.

v. Geography: association with nature study: descriptive geography and stories: cause and effect in geography: use and construction of maps: school journeys.

vi. History: aims and methods at different ages: use of chronology: great men and their connexion with great events: place of local history: citizenship.

vii. Singing: simple voice training: sight-singing: choice of songs.

N.B.—1. There will be no set book for formal examination but candidates will be expected to display in their answers an acquaintance with the "Suggestions for the consideration of Teachers, &c." issued by the Board.

2. Questions will be set which bear directly upon methods of teaching in Junior and Infants' schools.

3. The Paper will include special questions for sighted teachers in Certified Schools for Blind Children, and for teachers in Certified Schools for Deaf, Defective, or Epileptic Children. While it will be open to such teachers to attempt questions in any part of the Paper, they will be able to answer the full number required from the special section appropriate to their case.

SECTION C.—MUSIC:—

(i) THEORY OF MUSIC IN BOTH NOTATIONS:—

STAFF NOTATION.

(1) Notes.

Their position on the treble and bass staves. All the major and minor scales. Diatonic and chromatic intervals. Transposition.

(2) Time.

The value of notes, dotted notes, tied notes and rests. Signatures of all simple and compound times. Accent and synco-pation. Contents of bars. Transcription from one time to another.

(3) Musical terms in common use.

(4) The compass and registers of the various voices of men, women and children. General rules relating to voice training. Translation of a short passage into Sol-fa Notation.

TONIC SOL-FA NOTATION.

(1) Notes.

The major and minor modes. Diatonic and chromatic intervals. Names of chromatic tones. Removes of keys, bridge-notes and distinguishing tones.

(2) Time.

All the measures in common use. Division of pulses into thirds and quarters. Transcription of values by doubling, halving, etc. Accent and syncopation. Translation of a short passage into Staff Notation.

Candidates may also be asked to write a sight-singing test in any time, or key suitable for any class.

(ii) PRACTICAL MUSIC:—

[Candidates who are unable to take this part of the syllabus may omit it; but they will, of course, obtain fewer marks than those who take the whole syllabus.]

Graded tests in tune, time, and ear-training, based upon the requirements of the various school divisions.

| The tests must be sung from both the Staff and Tonic Sol-fa Notations.

SECTION D.—DRAWING:—

1. Drawing on paper. Each candidate will be expected to draw on a half imperial sheet of paper, toned or otherwise, (i) a natural object, or (ii) a hand-made or artificial object, resting or suspended, or a group of objects, placed before him, to be represented as seen from the point of view at which the candidate may be seated. The drawing may be made in any medium, and should be as complete as the candidate can make it.

2. A Paper will be set to test (i) the candidates' knowledge of the aims to be kept in view in the teaching of Drawing, and of the methods by which a teacher should try to realise those aims; and (ii) their ability to illustrate not only lessons in Drawing, but also lessons in knowledge of the common facts of the external world, and in other subjects taught in Public Elementary Schools, by means of Drawing.

3. Students should come provided with water-colours (not dyes), brushes, water-bottle and dipper, pencils, pastels, etc., and also drawing-boards and drawing-pins.

SECTION E.—NEEDLEWORK (for women only):—

I.—THEORY.

A short Paper will be set on the methods to be employed in teaching Needlework in Public Elementary Schools.

II.—PRACTICE.

The following exercises will be set:—

(a) A test in practical Needlework or Knitting. The exercise will be based on the Needlework and Knitting usually required from children in a Public Elementary School, and will include the stitches used in making and repairing simple garments;

and

(b) An exercise in cutting out and putting together the various parts of a garment.

SECTION F.—ENGLISH LANGUAGE, LITERATURE, AND COMPOSITION:—

1. The principles and practice of English Composition.

2. For detailed study:—

(a) *Shakespeare*: "Macbeth"

and

(b) *Bacon*: The following Essays:—

Of Anger, Friendship, Vain-Glory, Suspicion, Counsel, Beauty, Nobility, Usury, Negotiating, Death, Simulation and Dissimulation, Goodness, and Goodness of Nature.

3. For general reading:—

(a) An anthology of verse.

The following are suitable, but candidates may use any similar book:—"The Golden Treasury of Songs and Lyrics" (F. T. Palgrave), "The Oxford Book of Verse" (A. T. Q. Couch), "The Paradise of English Poetry" (H. C. Beeching), "English Lyrics from Chaucer to Poe" (W. E. Henley), "The Flower of the Mind" (A. Meynell).

(b) Some of the following:—

Shakespeare: "Romeo and Juliet," "Cymbeline," "Antony and Cleopatra," "The Taming of the Shrew."

Milton: "Comus," "Arcades," "Lycidas," "Sonnets."

Pope: "Essay on Man," Books I. and II.

White: "Natural History of Selborne."

Gibbon: Autobiography.

Jane Austen: "Emma."

Scott: "Old Mortality," "Rob Roy," "A Legend of Montrose."

Byron: Selected Poems in the "Golden Treasury" series.

Dickens: "Pickwick Papers," "Dombey and Son."

Thackeray: "The History of Pendennis."

Mrs. Gaskell: "Cranford."

Trollope: "The Warden."

Whyte Melville: "The Queen's Mariages."

Matthew Arnold: "Essays in Criticism" (First Series).

It is recognised that general reading cannot be wholly tested by direct examination, although its effect upon the intelligence and style of the candidate should appear in every Paper. A large number of alternative questions will, however, be set, some of which all candidates who have read a fair number of the books suggested may reasonably be expected to be able to answer.

4. Candidates will be required to write an Essay.

SECTION G.—HISTORY:—

(1) The development and working of the most important institutions in the government of the United Kingdom, including the local government of England and Wales, and the relations of the Colonies and Dependencies to the Imperial Government.

(2) The History of the growth of the British dominions outside Europe from the discovery of America to the present day.

SECTION H.—GEOGRAPHY:—

1. Mathematical and Astronomical Geography, including the interpretation and drawing of maps and charts, and a knowledge of map-projection.

2. Physical Geography; general distribution of land and water; principal factors determining climate; general distribution of winds, temperature, rainfall, tides and currents; common materials forming the Earth's crust; various types of land-relief, coastline, and river features; lake systems; the distribution and effects of volcanoes.

3. Characteristics and distribution of the following vegetation zones—tundras, coniferous forests, deciduous forests, prairies, steppe-lands, deserts, tropical forests.

The general distribution of plants, animals, and man in relation to these natural regions. Areas of dense and scanty population as determined by land-configuration, climate, geographical position, and productions.

4. Geography of the British Isles.

(a) Physical Conditions.

General knowledge of the structure of the United Kingdom; influence of rock-structure on topography.

Distribution of land-forms, mountains, plateaux, escarpments, and plains.

General distribution of soils as determined by structure and topography.

River systems in relation to topography. Distribution of temperature and rainfall over the United Kingdom, including a knowledge of the rainfall map and isothermal lines.

Distribution of mineral wealth; coal, iron, tin, copper, and other minerals; building stones and materials.

(b) Economic Geography.

Distribution of agricultural products and industries as determined by physical conditions, especially cereal, fruit, and pasture areas; textile industries; mining industries; iron and ship-building centres.

Distribution of population. Distribution of towns and their geographical significance. Arteries of commerce, natural and artificial.

5. An advanced knowledge of Europe and a general knowledge of the World as a whole, especially of those portions which belong to the British Empire.

Candidates will be expected to show a more thorough grasp of geographical principles than is required for the Preliminary Examination. They are recommended to pay close attention to the connection of physical geography with historical, political and economic geography.

Questions will be set having special reference to Wales.

SECTION I.—ELEMENTARY MATHEMATICS (INCLUDING ARITHMETIC):—

Two Papers will be set in Mathematics. The first Paper, which must be taken by all candidates, whether men or women, will contain questions on Arithmetic and Algebra, Part I. It will also include some simple questions in Geometry, but women candidates will be able to answer a sufficient number of questions without attempting the questions in Geometry. The second Paper will contain questions in Arithmetic and Algebra, Part II., and in Geometry. All men candidates will be required to take it, but women candidates need not take it unless they desire to obtain distinction.

ARITHMETIC AND ALGEBRA.

PART I.

Arithmetic, excluding Troy Weight, Apothecaries' Weight, True Discount, Cube Root, Foreign Exchange, and Scales of Notation. Questions on Stocks will not involve a knowledge of "Brokerage." Candidates must be acquainted with the Principles of the Metric system. Algebraical symbols and processes will be generally permitted.

Algebra as far as, and including, simple equations of one unknown, with easy problems leading up to such equations.

PART II.

Quadratic equations of one unknown, simple simultaneous equations of two unknowns and easy simultaneous equations involving the squares of the unknowns and problems leading up to these equations.

Arithmetical progressions; geometrical progressions to a finite number of terms; square root, highest common factors and lowest common multiples, ratio and proportion. Permutations and combinations. The Binomial Theorem for positive integral exponents; the use of logarithmic tables.

N.B.—Questions involving graphical methods may be set in both parts, and when such questions are proposed squared paper will be provided.

GEOMETRY.

Every candidate must be provided with a ruler graduated in inches and tenths of an inch and in centimetres and millimetres, a small set square, a protractor, compasses furnished with a hard pencil point, and a hard pencil.

Figures should be drawn accurately with a hard pencil.

Questions may be set in which the use of the set square or of the protractor is forbidden.

Any proof of a proposition will be accepted which appears to the Examiners to form part of a logical order of treatment of the subject. In the proof of theorems and deductions from them, the use of hypothetical constructions is permitted.

PRACTICAL GEOMETRY:—

The following constructions and easy extensions of them:—
Bisection of angles and of straight lines. Construction of perpendiculars to straight lines. Simple cases of construction from sufficient data of triangles and of quadrilaterals. Construction of parallels to a given straight line. Construction of angles equal to a given angle. Division of straight lines into a given number of equal parts.

Construction of a triangle equal in area to a given polygon. Construction of tangents to a circle. Construction of common tangents to two circles. Construction of circumscribed, inscribed, and escribed circles of a triangle. Construction of a segment of a circle containing an angle of given magnitude. Division of straight lines into parts in any given proportion. Constructions of a fourth proportional to three given straight lines, and of a mean proportional to two given straight lines. Division of straight lines in extreme and mean ratio. Division of a straight line internally or externally into segments, so that the rectangle under the parts is equal to a

given square. Construction of regular polygons in and about circles. Construction of a circle from sufficient data of the following character:—

(1) radius given, (2) point on the circle given, (3) contact with a given straight line or circle, (4) contact with a given straight line at a given point. Construction of a rectilinear figure to a specific scale or of specified area, and similar to a given figure. Construction of a square equal in area to a given polygon. (In cases where the validity of a construction is not obvious, candidates may be required to indicate the reasoning by which it is justified.)

Illustration and explanation by means of rectangular figures of the following identities:—

$$k(a + b + c + \dots) = ka + kb + kc + \dots$$

$$(a + b)^2 = a^2 + 2ab + b^2,$$

$$(a - b)^2 = a^2 - 2ab + b^2,$$

$$a^2 - b^2 = (a + b)(a - b).$$

THEORETICAL GEOMETRY:—

Candidates should be acquainted with the fundamental propositions concerning angles, parallel straight lines, and the congruence of triangles, such as are contained in the substance of Euclid, Book I., Propositions 4-6, 8, 13-16, 18, 19, 26-30, 32. Easy deductions from these theorems will be set, and arithmetical illustrations will be included.

The substance of the theorems contained in Euclid, Book I., Propositions 33-41, 43, 47, 48; and Book III., Propositions 3, 14-16, 18-22, 31, 32, 35-37; Book VI., Propositions 1-8, 19, 20, 33, together with Propositions A and D. Questions upon these theorems, easy deductions from them, and arithmetical illustrations will be included.

In dealing with proportion, it may be assumed that all magnitudes of the same kind can be treated as commensurable.

Candidates will be expected to be acquainted with the forms of the cube, the rectangular block, the tetrahedron, the sphere, the cylinder, the wedge, the pyramid, and the cone.

SECTION J.—ELEMENTARY SCIENCE:—

Candidates must show a practical knowledge of the subjects taken; they should have performed the greater part of the experimental and observational work themselves, and the questions will be framed on this supposition.

The experiments in the following Syllabuses should be closely connected, and should be made with some definite object in view. The instruction should aim at creating in the students an interest in the changes and operations which they see going on around them, and also a desire to understand them. For this purpose the materials used should wherever possible be those met with in common life.

Candidates will be expected in the Examination to be able to apply their knowledge to problems of everyday life; their exercises should therefore be devised to attain that end and to induce them to try to explain for themselves the various facts and changes which they see, and which should themselves often be made the starting point of their studies. The Syllabuses are not exhaustive and the various applications have as a rule been purposely omitted; they should, however, be supplied by both students and teachers.

Candidates may be examined in whichever they prefer of the two alternative Syllabuses set forth below.

Candidates must come provided with a ruler graduated in inches and tenths of an inch and in centimetres and millimetres, a small set-square, a protractor, compasses furnished with a hard pencil point, and a hard pencil.

SYLLABUS No. I.

(ALTERNATIVE TO SYLLABUS No. II.)

Candidates who take this Syllabus must take the Introductory Section and also one of the Sections A, B, or C.

Introductory Section.

Lengths; areas; volumes; weights; British and metric systems; simple lever-balance; density of solids and liquids; principle of Archimedes; specific gravity; flotation, hydrometer, and lactometer; U tube; barometer.

Measurement of expansion by heat of solids, liquids, and gases. Convection currents in both liquids and gases. Applications to hot-water circulation systems, and ventilation. Thermometers. Experiments on melting and solidifying points, on boiling points and on evaporation and condensation with the following substances: paraffin wax, butter, margarine, water, salt solution, methylated spirits; and with fat and olive oil in connection with cooking.

Measurement of heat; specific and latent heats, treated very simply.

Study of the effect of heat and acids on such common substances as chalk, washing soda, bicarbonate of soda, iron, copper, lead; the burning of starch, sugar, animal and vegetable matters; the rusting of iron, and the burning of phosphorus and magnesium. These experiments should lead to a knowledge of the composition of chalk, air, and water, and should have shown that carbon, iron, copper, etc., unite with oxygen to form oxides, and that foodstuffs such as starch and sugar contain both carbon and hydrogen.

Solubility of solids and liquids in hot and cold water, in alcohol, benzine, and other solvents, *e.g.*, salt, sugar, starch, oils, grease, resin, etc.

Hard and soft waters; soap solution; natural waters; impurities in water.

Experiments to find the amount of water contained in such substances as milk, vegetables, meat, soap.

Many of the above changes should be studied quantitatively, *e.g.*, the increase or decrease in weight; the volume of gas evolved from known weights of substances.

A.—Chemistry.

In addition to the paragraph on Chemistry in the Introductory Section, the following:—

Boyle's Law. Further study of chemical change.

The following reactions should be studied and a knowledge of the products will be expected:—

Action of strong sulphuric acid on salt and nitre.

Action of hydrochloric acid on red lead and manganese dioxide.

Action of strong sulphuric acid on copper.

Study of the formation of salts. Preparation and properties of ammonia. Properties of caustic soda and potash. Alkalis and acids contrasted. Quantitative experiments in neutralisation. Acids, bases, and salts. Solution, solubility curves.

Simple practical study of oil, fat, albumen, starch and sugar.

The composition by volume of the following—hydrogen chloride, ammonia, gaseous oxides of nitrogen and carbon.

A detailed study of the preparation and composition of various compounds chosen with a view to the explanation and proof of the laws of gaseous combination, definite and multiple proportion.

The atomic theory. Formulæ and equations.

B.—Physics.

(Candidates will not be required to cover the whole Syllabus.)

The subject matter contained in the paragraphs on Measurement and Heat in the Introductory section.

Boyle's Law. Measurement of force by spring balance or dynamometer; parallel forces; centre of gravity; parallelogram and triangle of forces; inclined plane; simple pendulum; statical couples; moment of a force; motion of falling bodies; units of mass, force, and work, etc.

Transference of heat; quantity of heat; specific and latent heats; dew point; vapour pressure and boiling point.

Propagation of light; shadow; photometry; laws of reflection and refraction, with reference to plane surfaces; lenses; focal lengths; real and virtual images; simple telescope and microscope; prism and spectrum.

Properties of magnets; magnetic induction; magnetic lines of force; Earth as a magnet, dip and declination. Electrification by friction or induction; conductors and insulators; gold leaf electroscope; distribution of electrification on conductors; hollow conductors. Simple voltaic cells; effects of electric current; magnetic field; electro-magnets; measurement of current.

C.—Botany.

Structure and germination of seeds. Bean, pea, wheat, maize, sycamore, oak, and sunflower. Rate of growth of root and stem; experimental demonstration of direction of growth of these two organs; influence of light and gravity upon the direction of growth.

Experiments on the physiology of plant-nutrition. The structure and function of the leaf, stem and root. Absorption of water and soluble salts by the root. Root hairs. Experimental demonstration of root-pressure. Growth of plants in different nutrient solutions. The paths taken by food materials in their passage through the plant. Diastase. The transformation of starch into sugar.

The flower. The parts and their functions. Experiments on effect of removing stamens or pistil. Relations of plants to insect life. Wind pollination. Formation of fruit. Dispersal of seed.

General structure, appearance, and arrangement of the young leaves, and mode of expansion of the buds, of sycamore, horse chestnut, oak, Scots pine and larch.

Study of common plants. The structure of the sweet pea and crocus, so far as they can be examined with the naked eye or a pocket lens; the development of the seedlings of the sweet pea into the adult plant; the life-history of the crocus during one year. The following plants should also be studied:—Ivy, potato, blue bell (*scilla*), primrose, cowslip, buttercup,celandine (*ranunculus ficaria*), dandelion, coltsfoot, daisy, gorse, clover, vetch, scarlet runner, bean, violet, pansy, orchis, dog-rose, hawthorn, strawberry, cleavers, heath, crowberry, water-crow-foot, marsh marigold, bittersweet (nightshade), common grasses (three or four—including wheat and oat), wood-sorrel. Attention should be paid to any special adaptations for protection, storage of food, pollination, and dispersal, the structure of the flower, the time of flowering, the kind of locality in which each plant is found, and the details of structure which adapt it to its surroundings. Technical descriptions will not be asked for.

The identification of the following common trees at various seasons and by means of various parts and organs such as buds, bark, leaves, etc.:—Oak, ash, beech, sycamore, horse chestnut, elm, poplar, alder, willow, birch, hazel, mountain ash, Scots pine, larch, lilac, laburnum.

The struggle for light and air studied in the field. Comparison of creeping plants, rosette-forming plants, grass-like-plants, shrubs, trees and climbing plants. Form and arrangement of leaves. Storage of food. Annuals, biennials, perennials.

The course is intended to serve as a training in scientific observation and experiment. It includes only such parts of the subject as can be dealt with experimentally or by the examination of specimens, and affords ample opportunity for out-door observations and field-work.

SYLLABUS No. II.

Elementary Rural Science and Gardening.

The Chemistry and Physics of air and water so far as they may be required to understand clearly the phenomena of elementary plant physiology.

Seeds. A variety of seeds should be examined and the conditions of germination and mode of growth studied.

Roots. Effect of gravity. Rate of growth. Root hairs. Absorption. Examination of various forms of roots.

Leaves. Structure. Why leaves are flat. Leaf veins. Position of stomata. Experiments in transpiration and the movement of sap in stem. Conditions which determine the loss of water by the leaves. Effect of sunlight, and other conditions necessary for the formation of starch. How starch feeds the plant. Disappearance of starch at night. Conversion of starch into sugar.

Stem and Buds. Development of buds. Structure of woody stem. Yearly growth of stem. Examination of cross-sections of stems and location of starch. Budding and grafting. Formation of roots on cuttings. Creeping stems, above and under ground. The development of a bulb and corm traced from month to month.

Flowers, Fruits, and Seeds. The parts of a flower and their uses. Transference of pollen. Catkins. Study of fruits. Dispersal of fruits and seeds.

Review of Plant Life. Early dependence on food provided by parent. How the plant obtains, stores, and spends its food. Annuals and biennials, bulbs, tubers, and perennials.

Plant Life supplied by Soil. The ashes of plants examined to obtain indications of food requirements. The tracing of ash ingredients and nitrogen to the soil by plant cultures. How plants appropriate soil food:—The part played by water and carbonic acid.

Origin and Composition of Soils. Soils and subsoils studied *in situ*. Experiments on the mechanical composition of various soils. Classification of soils and study of their properties, including porosity and capillarity. The effect of lime on soils. The difference between surface soil and subsoil. Decayed plant substance. Humus and its fermentation.

Work to be done in the Garden. The practical cultivation of lettuce, cabbages, cauliflower, beans, peas, beet, carrots, turnips, celery, onions, and potatoes.

Propagation of plants by cuttings and by layering, of roses by budding, and of corms and bulbs.

SECTION K. }
and } Optional.
SECTION L. }

One or two of the following Languages:—

LATIN.	GERMAN.
GREEK.	WELSH.
FRENCH.	HEBREW.

No set books are prescribed for study. The passages for translation into English will be taken both from prose-writers and from poets.

Passages for translation from English into the Language and, in the case of modern Languages, exercises in free composition will be set.

A sound knowledge of grammar and syntax will be required.

SECTION M.—OPTIONAL. HYGIENE AND PHYSICAL TRAINING:—

(1) Hygiene.

SECTION I.—INTRODUCTORY.

The place of man in the animal kingdom.
 The cell as unit of tissues and organs of the body.
 Structure and function, work and rest. Division of labour.
 The child a developing and immature human being. Factors (other than hereditary and antenatal conditions) influencing its development; environment; nutrition and training (particularly of brain and nervous system during plastic period of growth).
 The common characteristics of children in health.

SECTION II.—THE SKELETON AND MUSCULAR SYSTEM.

The skeleton and its development in the young. Joints. Locomotion.
 Importance of attitudes and postures. Spinal curvature.
 The muscular system and its relation to the nervous system.
 *Physical exercises, dancing and games. Muscular fatigue.

SECTION III.—THE DIGESTIVE SYSTEM.

The alimentary canal and the process of digestion, commencing in mouth. Hygiene of mouth and teeth.
 Amount and sorts of food for children, uses and values.
 The dangers to which people are exposed by taking too much or too little food, tainted food, alcohol, &c.†
 Signs of malnutrition. Rickets.

SECTION IV.—THE RESPIRATORY AND CIRCULATORY SYSTEMS.

The purpose of the circulation of the blood. Blood, heart and blood vessels. Anæmic children. The lymphatic system.
 The lungs. Purpose and mechanism of respiration. Breathing exercises.
 Obstructions to breathing (adenoids, &c.).
 Difference between fresh and expired air.
 Relation of respiration and circulation to nervous system. The effects of exercise, tight clothing, &c.
 Advantages of an open-air life.

SECTION V.—THE EXCRETORY SYSTEM.

Care of the body.
 Importance of personal cleanliness, regular habits, nutrition, clothing.
 Waste matter. Waste matter as a result of work, undigested food.
 Excretory organs and how they work; skin, kidneys, lungs, &c.

SECTION VI.—THE NERVOUS SYSTEM.

Brain, spinal cord, motor and sensory nerves.
 Reflex action. Brain centres and nerve cells. The way the brain works.
 Co-ordination and association.
 Requirements of a healthy nervous system (nourishment, regular habits, physical exercises, manual and intellectual work, periods of rest and change of occupation). Evil effects of malnutrition, overstrain, impure air, bad habits, alcohol. Mental dulness, feeble-mindedness, headaches, neuralgia; how to detect and deal with them in School.

* For the teaching of Physical Exercises the Board's official Syllabus should be followed.

† For instruction relating to alcohol the Board's Syllabus of *Lessons on Temperance* should be followed.

Development of child's nervous system. Sensory receptivity, reflex movement, imitation, attention, self-control. Nourishment and education of nerve cells. Development of motor centres by muscular exercise.

Physical and mental fatigue.

SECTION VII.—SENSE ORGANS.

Relation of sense to nervous system.

Their training and development.

Sense of Sight.—Structure of the eye. Eye muscles; mechanism of accommodation. Eye strain, particularly in young children.

Defects of vision and common eye diseases such as a teacher may notice.

Short and long sight, &c. Vision testing.

Effect on sight of bad light, long hours, small print, close work, &c., specially in childhood.

SECTION VIII.—SENSE ORGANS (*continued*).

Hearing.—Structure of ear. Causes and signs of defective hearing. Tests. How the teacher can train the sense of hearing.

Speech.—The structure and use of vocal organs. How to deal with defective articulation and train the speaking voice in school. Speech defects.

Sense of Smell.

Sense of Touch.—Co-ordination, temperature, feeling, muscular sense.

SECTION IX.—SANITATION OF THE SCHOOL.

Requirements of the healthy school:—

Suitability of site, soil, and construction (various types of school buildings).

Water Supply.—Collection, storage, and distribution. Various forms of pollution. Methods of prevention.

Sanitary conveniences (various types), drainage, refuse removal.

Earth closets and their management.

Effects of sewer gas.

SECTION X.—SANITATION OF THE SCHOOL—(*continued*).

Ventilation—cubic capacity, amount of fresh air necessary. Impurities of atmosphere and their effects. Methods of ventilation.

Warming and lighting.

Equipment.—(Class-rooms, desks, blackboards, cloakrooms, lavatories, &c.) The Hygiene of Infant Departments.

Cleanliness.—Class-room as an object lesson in health.

Duties of individual in relation to health of community.

SECTION XI.—DISABILITIES AND DISEASES OF CHILDREN.

The relation of micro-organisms to disease. Conditions of their life. Relation of seed (bacteria) and soil (body tissues). Means of resistance. Chief characteristics of ailing children. Conditions disposing to disease.

Early signs and symptoms of ill-health in children (nervous conditions, infectious diseases, parasites).

SECTION XII.—MEDICAL INSPECTION OF SCHOOLS, &c.

The objects and method of medical inspection of schools and school children.

Methods of detecting and dealing with physically and mentally defective children.

Direct and indirect means of cultivating good physical habits in school, and adapting education to the physical needs of the child. (Example and health of teacher, games, physical exercises, ventilation, cleanliness, absence of near-eye work.)

School closure and exclusion of children on medical grounds. First aid in minor injuries and common ailments.

Disinfection.

(2) Physical Training.

In the course of Physical Training attention should be given to the following subjects:—

- (i) *Practical Physical Exercises*, which should include all exercises, games, &c., of the Board's Syllabus of Physical Exercises for Public Elementary Schools, 1909. Simple apparatus work and more advanced exercises may be added if the conditions are suitable.
 - (ii) *The Theory of Physical Exercises*, which should follow the lines laid down in the Board's Syllabus of Physical Exercises. The relation of Physical Training to Hygiene, and the practical application of theoretical principles to school life, should be dealt with in some detail.
 - (iii) *Training in* (a) Commanding.
 - (b) Teaching fellow-students.
 - (c) Teaching a class of children.
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BOARD OF EDUCATION.

SYLLABUS OF THE PRELIMINARY
EXAMINATION FOR THE ELE-
MENTARY SCHOOL TEACHERS'
CERTIFICATE, 1916.

PART I. DECEMBER, 1915.

PART II. APRIL, 1916.



LONDON:

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PREFATORY NOTE.

Alteration introduced this year in the Regulations and the Syllabus are indicated by a marginal line.

Attention is particularly called to the alteration in the wording of Regulation 8(c). In the past all candidates have been required, in addition to taking Part I. of the Examination and the three Compulsory Subjects of Part II., to take also one or more of the following subjects:—Elementary Mathematics, Elementary Science, Latin, Greek, French, German, Welsh, Hebrew. The Regulations for 1916 omit this requirement and leave it optional with candidates whether they will take any of the last-named subjects.

The Board have come to the conclusion, after carefully considering the results of recent Examinations together with certain representations which have been made to them on the matter, that among the candidates who enter for this Examination and who are qualified to pass in it there are a certain number who would profit more by following a rather less extensive syllabus than the one which has hitherto been required. The change is not intended to involve any lowering in the standard of the Examination taken as a whole. The Board propose that the reduction in the number of Compulsory Subjects shall be compensated for by the requirement of a somewhat higher standard of work in the subjects which candidates will still be obliged to take, and they anticipate that the Examination as it will now be modified will enable examiners to distinguish between good and bad candidates more easily and effectively than the present Examination. Those candidates who are able to follow with profit a more extensive course, will still be able, as at present, to take one or more of the Optional Subjects named.

SYLLABUS OF THE PRELIMINARY EXAMINATION
FOR THE ELEMENTARY SCHOOL TEACHERS'
CERTIFICATE, 1916.

REGULATIONS.

(1)—(a) The Board hold an annual Examination, called the Preliminary Examination for the Elementary School Teachers' Certificate, to which persons are admitted on complying with the prescribed conditions.

(b) The Examination is divided into two Parts. Part I. is held shortly before Christmas and Part II. about Easter. Part I. is a qualifying test and the marks obtained in it are not counted towards the result of Part II.

(c) Persons who are employed in Schools in Scotland, or are living in Scotland at the time of Part I. of the Examination, are, as a rule, not admitted.

(d) Persons who are recognised by the Board as Student-Teachers will not be admitted.

(2)—(a) Part I. of the Preliminary Examination for the Certificate, 1916, will be held on Thursday and Friday, December 9th and 10th, 1915, at Secondary Schools, Pupil-Teacher Centres, and such other places as may be necessary.

(b) Part II. of the Preliminary Examination for the Certificate, 1916, will be held on Tuesday, April 4th, 1916, and the three following days, at Secondary Schools, Pupil-Teacher Centres, and such other places as may be necessary.

(c) Copies of the Syllabus may be obtained on application to the Secretary, Board of Education, Whitehall, London, S.W.

(d) Specimen copies of the Syllabus are sent by the Board to all Local Education Authorities. On application being made by a Local Education Authority, a stock of the Syllabus will be supplied to them for distribution to candidates.

(3)—(a) Candidates must be persons who will be over 16 years of age on July 31st, 1915.*

(b) Candidates who at the time of Part I. of the Examination will be receiving instruction as pupils in a recognised Secondary School or in a Pupil-Teacher Centre recognised under Article 11 of the Regulations for the Preliminary Education of Elementary School Teachers, and Pupil-Teachers who are recognised under Article 28 of those Regulations will be regarded as "Internal" candidates. Other candidates will be regarded as "External" candidates.

(4) In order to pass in the Examination as a whole, Candidates must pass in Part I. and in Part II. separately. No candidate can enter for Part II. unless he has passed Part I. Candidates, however, who have passed Part I. of the Preliminary Examination for the Certificate in a previous year will not be required to take Part I. again as a condition of admission to Part II.

(5) Application for the admission of Internal candidates to the Examination, whether to Part I. or direct to Part II., must be made by the Correspondent of the Secondary School or Pupil-Teacher Centre in which the candidates are under instruction, and must reach the Board on or before November 1st, 1915; but applications on behalf of Pupil-Teachers who are recognised under Article 28 of the Regulations for the Preliminary Education of Elementary School Teachers should be made

* For the purpose of these Regulations a person is considered to complete each year of age immediately on the commencement of a birthday. Thus a person born on July 31st, 1899, is over 16 years of age on July 31st, 1915, and is qualified, therefore, for admission to the Examination; but a person born on August 1st, 1899, is not.

4 . Preliminary Examination for the Certificate, 1916.

by the Local Education Authority. Applications received by the Board after November 1st will be entertained only in exceptional circumstances, and in such cases a fee of 1*l.* for each candidate will be required.

(6)—(a) Local Education Authorities for Part II. of the Education Act, 1902, are responsible for making the local arrangements for the examination of External candidates in their area. All communications regarding the arrangements for the examination of External candidates should be addressed to the Local Education Authority and not to the Board of Education.

(b) Application for permission for an External candidate to attend the Examination must be made to the Local Education Authority for the County or County Borough in which the candidate is employed or (if not in employment) resides. Candidates employed or residing in a town which is not a County Borough should apply to the Authority for the County in which the town is situated.

(c) All External candidates taking the Examination, whether they are taking Part I. or are proceeding direct to Part II., are required to pay an entrance fee. The fee will be 5*s.* for candidates whose applications reach the Local Education Authority on or before October 1st, 1915. Candidates whose applications reach the Authority after October 1st, but not later than November 1st, will be required to pay an entrance fee of 10*s.* Applications received by the Authority after November 1st will be entertained only in exceptional circumstances, and any candidate so applying will be required to pay a fee of 1*l.* No fee should be sent with the application; instructions for its payment will be given by the Authority.

(7)—(a) Candidates who pass Part I. in December 1915, are not required to apply for permission to attend Part II. in April 1916. A Form conveying the Board's permission will be sent in due course.

(b) Candidates who have passed Part I. of the Preliminary Examination for the Certificate in a previous year and are therefore qualified for admission to Part II. without taking Part I., must, like all other candidates, comply with the requirements of Regulations (5) and (6). A Form conveying the Board's permission to attend Part II. will then be sent in due course.

(8)—(a) In Part I. all candidates will be examined in Reading, Composition, Penmanship, Arithmetic, Drawing, and Theory of Music. Girls will also be examined in Needlework.

(b) In the case of Internal candidates a Certificate of Proficiency in Reading, given by the Head Master or Mistress of their Secondary School or Pupil-Teacher Centre (or by the Head Teacher of the School in which the Pupil-Teacher is recognised, if the Pupil-Teacher is recognised under Article 28 of the Regulations for the Preliminary Education of Elementary School Teachers), will be accepted in place of a test by the Inspector in that subject.

External candidates will be examined in Reading by the Inspector either on the day of the Examination or at some time during the four weeks preceding the written examination.

(c) In Part II. all candidates will be examined in the three compulsory subjects—English Language and Literature, History, and Geography. Candidates may also take one or more of the following Optional Subjects:—Elementary Mathematics, Elementary Science, Latin, Greek, French, German, Welsh, Hebrew. Not more than two Languages may be taken.

(9)—(a) All candidates who (i) satisfy the requirements as to Reading, (ii) obtain a satisfactory aggregate of marks in Part I. as a whole, and (iii) reach a certain standard in Arithmetic and Composition, will be considered to have passed Part I.

(b) All candidates who obtain a satisfactory aggregate of marks in the three compulsory subjects in Part II. will be considered to have passed Part II. and the Examination as a whole. **The marks obtained for any Optional Subject (or Subjects) will not be included in this aggregate.**

(10) Candidates who pass the Examination as a whole may obtain distinction in Part II. in any one or more of the three Compulsory Subjects and of four Optional Subjects. Distinctions are not awarded for the Subjects included in Part I.

(11)—(a) Candidates will be informed of the result of their examination in Part I. and in Part II.

(b) As soon as possible after the announcement to candidates of the result of their examination in Part II., there will be published a Result List of the Examination as a whole, containing the names of candidates who have passed Part II., and have, therefore, passed the Examination as a whole, in alphabetical order without classification. The List will show the Subjects in which candidates obtained distinction.

(12) Candidates who pass the Examination as a whole will be regarded as qualified, so far as examination requirements are concerned, for recognition as Uncertificated Teachers under Schedule I.C. of the Code and for admission to a Training College.

(13) The Papers set at the last Examination are published separately in pamphlet form, and may be obtained from Messrs. Wyman and Sons, Ltd., Fetter Lane, London, E.C., price 6*d.*; by post, 7*d.* The Result Lists of previous Examinations also may be obtained from Messrs. Wyman, price 6*d.* each; by post, 7*d.*

DETAILED SYLLABUS OF THE SUBJECTS OF THE EXAMINATION.

Defective spelling or handwriting will be taken into account in estimating the value of a candidate's work.

The use of rulers is allowed for the Geography, Mathematics, and Science Papers in Part II. No credit will be given for the use of them in any other Paper. The use of stencils is forbidden.

PART I.

I.—Reading:—

To read with clear enunciation, ease, and intelligence, from a work of a standard prose author and a work of a standard poet.

II.—Composition.

III.—Penmanship:—

To set copies in large and small hand.

IV.—Arithmetic:—

Excluding Troy Weight, Apothecaries' Weight, Practice, Ratio, Proportion except by the unitary or fractional method, Stocks and Shares, True Discount, Foreign Exchange, Scales of Notation, Recurring Decimals and complicated fractions, and Square and Cube Roots.

Candidates may be asked to find the square or cube roots of numbers that can readily be expressed as the product of the squares or cubes of small factors.

The metric system will only be applied to measuring length, area and volume.

Questions may be set on the mensuration of rectangular surfaces and solids, triangles, circles, cones, and cylinders.

The use of algebraical symbols will be permitted.

As a rule, the questions set will not involve long operations or complicated numbers, and the answers to money sums will not be required beyond the nearest penny.

The Papers will be sufficiently long to allow candidates some latitude in the selection of questions, but no limit will be placed on the number of questions which may be attempted.

V.—Drawing:—

Candidates will be required to undergo a test in (1) or (2) or both.

(1) Drawing of Natural Objects.

Candidates will be required to draw from memory on a half imperial sheet of paper a natural object (*see below*), as seen from various points of view. The drawings may be executed with any medium, and should be as complete as the candidate is able to make them. No ruling, measuring, tracing, or other mechanical aid whatever is allowed.

Candidates should have gone through a graduated series of exercises in drawing from plants, foliage, flowers, and other natural objects, for the purpose of acquiring (a) a general knowledge of organic form, and a knowledge of the form, structure, colour, and other characteristics of natural objects from direct study of them, together with an appreciation of their beauty, and (b) the power of drawing freely and accurately from natural objects, not only while the objects are in sight, but also from memory and knowledge.

(2) Drawing of Handmade and Artificial Objects.

Candidates will be required to draw from memory on a half imperial sheet of paper, white or toned, a familiar object (*see below*).

as seen from various points of view, or a group of objects, as seen from a particular point. The drawings may be executed with any medium, and should be as complete as the candidate is able to make them. No ruling, measuring, or other mechanical aid whatever is allowed.

Candidates should have gone through a graduated series of exercises in drawing from common things of simple form, for the purpose (a) of acquiring by direct study of objects a general knowledge of form, and a knowledge of the form, structure, and other characteristics of such things, as well as of the effect of perspective in modifying their appearance, and (b) of representing them accurately and intelligently, not only while the objects are in sight, but also from memory and knowledge.

The exercises should not be restricted to drawing in pencil on white paper. A wider range of study is advisable in all cases. It is suggested that this might be obtained by the use of such means as toned paper, charcoal, pastel, pen, brush, &c.

VI.—Theory of Music:—

Candidates will be expected to show a knowledge of both the Staff and Tonic Sol-fa Notations.

Marks will be deducted for indistinct as well as inaccurate notation.

Staff Notation.

All the major and minor scales and signatures. Diatonic and chromatic intervals. Easy transposition. The value of notes, dotted notes and rests. Time names. Bars and time signatures. Transposition of time. Syncopation. Knowledge of the child voice. Common musical terms. Translation of a short passage into Tonic Sol-fa Notation.

Tonic Sol-fa Notation.

The major and minor modes. Bridge notes and first removes of key. Chromatic names. Relative pitch of keys and notes. Diatonic and chromatic intervals. Pulses, measures. Pulse division in halves, quarters, thirds, &c. Time names. Syncopation. Compass of voices. Common musical terms. Translation of a short passage into Staff Notation.

The writing of melodies in either Staff or Sol-fa Notation.

VII.—Needlework (Girls only):—

Candidates will be expected to give evidence that they understand the cutting-out, making and mending of ordinary garments, including underclothing.

A wide choice of questions will be set, and candidates will be given an opportunity of obtaining credit for whatever practical knowledge they possess.

PART II.

A.—COMPULSORY SUBJECTS.

I.—English Language and Literature:—

(1) English Grammar.

(2) The elements of English Composition and Literature.

All candidates should have undertaken as wide a course as possible of general reading, which should include amongst other books some of Shakespeare's plays, an anthology of verse, and some of the chief works of the most famous English prose-writers. The Paper will contain a wide choice of questions, and will as far as possible be framed so as to give candidates an opportunity of obtaining credit for any private reading they have done.

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Candidates will be expected to write an Essay.

Opportunity will be given to show a knowledge of Welsh.

II.—History:—

The outlines of British History from the earliest times to the present day, including the main landmarks of European History as they directly affect British History.

A wide choice of questions will be given, and a candidate who has studied a considerable portion of the History should be able to answer the full number required.

Questions will be set having special reference to Welsh History.

III.—Geography:—

Throughout the course attention should be directed to the connection of physical geography with historical, political and economic geography. Importance will be attached to the illustration of answers by sketch maps, sections and diagrams.

Questions will be set having special reference to Wales.

(1) Physical and Mathematical Geography:

Shape, size and movements of the earth; general distribution of land and sea, highland and lowland, wind and rain.

The land: sculpture and chief land forms, common rock materials, effect of relief upon drainage and means of communication.

The sea: waves, tides and currents, typical coast features.

The atmosphere: varying conditions as to temperature, moisture (rain) and pressure (winds), and the weather changes so produced.

Representation of earth's surface on globe and by map projections in common use; map reading and map construction generally, including the interpretation of the Ordnance Survey maps of the United Kingdom, orographical maps, isothermal maps, rainfall maps and weather charts.

(2) A General Knowledge of the World:

The chief natural regions as determined by topography, climate and vegetation; their characteristic flora and fauna; their cultivated productions; the distribution and occupations of their inhabitants as affected by natural environment.

The great ocean trade routes; the chief fishing grounds of the world.

(3) The Geography of the British Isles:—

Physical Conditions.—General knowledge of the structure of the United Kingdom; influence of rock structure on topography.

Distribution of land forms; mountains, plateaux, escarpments, and plains.

General distribution of soils as determined by structure and topography. The river system in relation to topography.

Distribution of temperature and rainfall over the United Kingdom with the chief determining factors. Candidates will be expected to know the rainfall map of the United Kingdom, and to be able to insert the chief isothermal lines.

Distribution of mineral wealth; coal, iron, tin, copper, and other minerals.

Economic Geography.—Distribution of agricultural products and industries, as determined by the physical conditions, especially cereal, fruit, and pasture areas; textile industries; mining industries; iron and shipbuilding centres.

Distribution of population. Arteries of commerce, natural and artificial.

(4) The Geography of Europe or of North America (including Greenland and the West Indies):

The continent selected should be treated from the points of view indicated under the heading of "British Isles" but only with reference to the more important features of the topography and the leading political divisions.

B.—OPTIONAL SUBJECTS.

IV.—Elementary Mathematics:—

The Papers set will be sufficiently long to allow candidates some latitude in the selection of questions, and will permit, therefore, of latitude in the teaching schemes. Candidates will not be limited in the number of questions which they may attempt, nor will they be expected to answer the whole Paper.

Every candidate should be provided with a ruler, graduated in inches and tenths of an inch and in centimetres and millimetres, a small set square, a protractor, compasses furnished with a hard pencil point, and a hard pencil. Squared paper will be provided when needed.

As a rule, the questions set will not involve long operations or complicated numbers, and the answers to money sums will not be required beyond the nearest penny.

ARITHMETIC.—Excluding Troy Weight, Apothecaries' Weight, True Discount, Foreign Exchange, Scales of Notation, Recurring Decimals and Cube Roots.

Candidates may be asked to find the cube roots of numbers that can readily be expressed as the product of the cubes of small factors.

Candidates must understand the principles of the metric system, and should be able to decimalise money readily.

Questions on Stocks and Shares will be of a simple character and will not involve a knowledge of brokerage.

The use of algebraical symbols will be permitted.

ALGEBRA.—As far as and including simultaneous equations (one of which is linear) in two variables, L.C.M. and H.C.F. by means of factors. Problems leading to the types of equations specified.

GEOMETRY:—

(1) PRACTICAL.

Bisection of angles and of straight lines.

Construction of perpendiculars to straight lines.

Construction of an angle equal to a given angle.

Construction of parallels to a given straight line.

Simple cases of the construction from sufficient data of triangles and quadrilaterals.

Division of straight lines into a given number of equal parts or into parts in any given proportions.

Construction of a triangle equal in area to a given polygon.

Construction of tangents to a circle and of common tangents to two circles.

Simple cases of the construction of circles from sufficient data.

Construction of a fourth proportional to three given straight lines and a mean proportional to two given straight lines.

Construction of regular figures of 3, 4, 6, or 8 sides in or about a given circle.

Construction of a square equal in area to a given polygon.

(2) THEORETICAL.

Angles at a Point.

If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right angles; and the converse.

If two straight lines intersect, the vertically opposite angles are equal.

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Parallel Straight Lines.

When a straight line cuts two other straight lines, if

- (i) a pair of alternate angles are equal,
- or (ii) a pair of corresponding angles are equal,
- or (iii) a pair of interior angles on the same side of the cutting line are together equal to two right angles,

then the two straight lines are parallel; and the converse.

Straight lines which are parallel to the same straight line are parallel to one another.

Triangles and Rectilinear Figures.

The sum of the angles of a triangle is equal to two right angles.

If the sides of a convex polygon are produced in order, the sum of the angles so formed is equal to four right angles.

If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles contained by those sides equal, the triangles are congruent.

If two triangles have two angles of the one equal to two angles of the other, each to each, and also one side of the one equal to the corresponding side of the other, the triangles are congruent.

If two sides of a triangle are equal, the angles opposite to these sides are equal; and the converse.

If two triangles have the three sides of the one equal to the three sides of the other, each to each, the triangles are congruent.

If two right-angled triangles have their hypotenuses equal, and one side of the one equal to one side of the other, the triangles are congruent.

If two sides of a triangle are unequal, the greater side has the greater angle opposite to it; and the converse.

Of all the straight lines that can be drawn to a given straight line from a given point outside it, the perpendicular is the shortest.

The opposite sides and angles of a parallelogram are equal, each diagonal bisects the parallelogram, and the diagonals bisect one another.

If there are three or more parallel straight lines, and the intercepts made by them on any straight line that cuts them are equal, then the corresponding intercepts on any other straight line that cuts them are also equal.

Areas.

Parallelograms on the same or equal bases and of the same altitude are equal in area.

Triangles on the same or equal bases and of the same altitude are equal in area.

Equal triangles on the same or equal bases are of the same altitude.

Illustrations and explanations of the geometrical theorems corresponding to the following algebraical identities:—

$$k(a + b + c + \dots) = ka + kb + kc + \dots,$$

$$(a + b)^2 = a^2 + 2ab + b^2,$$

$$(a - b)^2 = a^2 - 2ab + b^2,$$

$$a^2 - b^2 = (a + b)(a - b).$$

The square on a side of a triangle is greater than, equal to, or less than the sum of the squares on the other two sides, according as the angle contained by those sides is obtuse, right, or acute. The differences in the cases of inequality is twice the rectangle contained by one of the two sides and the projection on it of the other.

Loci.

The locus of a point which is equidistant from two fixed points is the perpendicular bisector of the straight line joining the two fixed points.

The locus of a point which is equidistant from two intersecting straight lines consists of the pair of straight lines which bisect the angles between the two given lines.

The Circle.

A straight line drawn from the centre of a circle to bisect a chord which is not a diameter, is at right angles to the chord; conversely, the perpendicular to a chord from the centre bisects the chord.

There is one circle, and one only, which passes through three given points not in a straight line.

In equal circles (or, in the same circle) (i) if two arcs subtend equal angles at the centres, they are equal; (ii) conversely, if two arcs are equal, they subtend equal angles at the centre.

In equal circles (or, in the same circle) (i) if two chords are equal, they cut off equal arcs; (ii) conversely, if two arcs are equal, the chords of the arcs are equal.

Equal chords of a circle are equidistant from the centre; and the converse.

The tangent at any point of a circle and the radius through the point are perpendicular to one another.

If two circles touch, the point of contact lies on the straight line through the centres.

The angle which an arc of a circle subtends at the centre is double that which it subtends at any point on the remaining part of the circumference.

Angles in the same segment of a circle are equal; and if the line joining two points subtends equal angles at two other points on the same side of it, the four points lie on a circle.

The angle in a semicircle is a right angle; the angle in a segment greater than a semicircle is less than a right angle; and the angle in a segment less than a semicircle is greater than a right angle.

The opposite angles of any quadrilateral inscribed in a circle are supplementary; and the converse.

If a straight line touch a circle, and from the point of contact a chord be drawn, the angles which this chord makes with the tangent are equal to the angles in the alternate segments.

If two chords of a circle intersect either inside or outside the circle the rectangle contained by the parts of the one is equal to the rectangle contained by the parts of the other.

Proportion: Similar Triangles.

If a straight line is drawn parallel to one side of a triangle, the other two sides are divided proportionally; and the converse.

If two triangles are equiangular their corresponding sides are proportional; and the converse.

If two triangles have one angle of the one equal to one angle of the other and the sides about these equal angles proportional, the triangles are similar.

The internal bisector of an angle of a triangle divides the opposite side internally in the ratio of the sides containing the angle, and likewise the external bisector externally.

The ratio of the areas of similar triangles is equal to the ratio of the squares on corresponding sides.

Elementary Solids.

Candidates will be expected to be acquainted with the forms and simple properties of the cube, rectangular block, sphere, cylinder, and cone.

NOTE.—Whenever propositions in the first two groups (Angles at a Point and Parallel Straight Lines) are set, alternative questions will also be set.

V.—Elementary Science:—

Candidates offering Elementary Science will be examined in any one of the following Syllabuses and may obtain distinction in the one selected.

Candidates will be expected to show a practical knowledge of the subjects taken; they should have performed the greater part of the experimental and observational work themselves, and the questions will be framed on this supposition.

The work whether experimental or observational should follow a definite sequence and should aim at creating in the students an interest in the changes and operations which they see going on round them.

Candidates will be expected to be able to apply their knowledge to problems of everyday life; the materials used should therefore as far as possible be those commonly met with.

Candidates should bring with them to the Examination a ruler, graduated in inches and tenths of an inch and in centimetres and millimetres, a small set square, a protractor, compasses furnished with a hard pencil point, and a hard pencil.

I.—ELEMENTARY EXPERIMENTAL SCIENCE.

Measurements of lengths; areas, volumes and weights in the British and metric systems. These measurements should be studied in their practical use in connection with definite experiments such as are suggested by the rest of the syllabus. Simple pendulum; lever; spring balance. Density of solids and liquids; flotation; principle of Archimedes; hydrometer; specific gravity; U tube; barometer.

Measurement of expansion by heat of solids, liquids and gases. Thermometers. Convection currents in both liquids and gases. Application to hot water circulation systems, and ventilation. Experiments on melting and boiling points, on evaporation and condensation, with such substances as the following: water, salt solution, methylated spirits, paraffin wax; fat and olive oil in connection with cooking. Simple experiments on specific and latent heats; heating and cooling of air by rapid expansion or contraction, formation of rain.

Study of the effect of heat and acids on common substances such as chalk, washing soda, bicarbonate of soda, iron, copper, lead. The study of combustion, including the rusting of iron and the burning of phosphorus, and of magnesium, carbon, starch, sugar, animal and vegetable matters. Experiments should be performed which lead to a knowledge of the composition of chalk, air, and water, and should show among other things that carbon, iron, copper, &c., unite with oxygen to form oxides, and that food stuffs, such as starch and sugar, contain both carbon and hydrogen.

Solubility of solids and liquids, *e.g.*, salt, sugar, starch, oils, fats, wax, resin, &c., in hot and cold water, in alcohol, turpentine, benzine, and other solvents.

Hard and soft waters, soap solution; natural waters; impurities in water.

Experiments to find the amount of water contained in such substances as milk, vegetables, meat, soap, and soil.

Many of the above changes should be studied quantitatively, *e.g.*, the increase or decrease in weight, the volume of gas evolved from known weights of substances.

II.—CHEMISTRY.

Where possible quantitative experiments should always be made, and attention should be directed to the degree of accuracy attainable by the method employed, and to the chief sources of error.

Solubility of solids and liquids, *e.g.*, salt, sugar, starch, oils, fats, wax, resin, &c., in hot and cold water, in alcohol, turpentine, benzine and other

solvents. Solubility curves. Identification of substances by their properties including physical constants.

Study of the effect of heat and acids on common substances such as chalk, washing soda, bicarbonate of soda, iron, copper, lead. The study of combustion, including the rusting of iron, and the burning of phosphorus and of magnesium, carbon, starch, sugar, animal and vegetable matters. Experiments should be performed which lead to a knowledge of the composition of chalk, air, and water, and should show among other things that carbon, iron, copper, &c., unite with oxygen to form oxides and that food stuffs, such as starch and sugar, contain both carbon and hydrogen.

Hard and soft waters; soap solution; natural waters; impurities in water.

The effects of pressure, and temperature on gases, Boyle's Law, Charles' Law. Diffusion of gases.

The following reactions should be studied and a knowledge of the products should be obtained :—

Action of heat on mercuric oxide, and on chlorate of potash.

Action of sulphuric acid on salt and nitre.

Action of hydrochloric acid on red lead and manganese dioxide.

Action of sulphuric acid on copper, zinc, and iron.

Study of the formation of salts. Preparation properties and composition of ammonia. Properties of caustic soda and potash. Alkalis and acids contrasted. Experiments in neutralisation. Acids, bases, and salts.

Simple practical study of oil, fat, albumen, starch, and sugar.

III.—PHYSICS.

Candidates will not be expected to cover the whole of the Syllabus.

In all the subjects enumerated below quantitative measurements should always be made when possible, and attention should be directed to the degree of accuracy attainable by the method employed, and to the chief sources of error.

Density of solids and liquids; laws of fluid pressure; flotation; principle of Archimedes; hydrometer; specific gravity; U tube; barometer; Boyle's law; Hook's law. Dynamometer; spring balance, measurement of force; levers, parallel forces, centre of gravity; parallelogram and triangle of forces; inclined plane; simple pendulum.

Measurement of expansion by heat of solids, liquids and gases. Thermometers. Specific heat. Experiments on melting and boiling points, on evaporation and condensation; latent heat; vapour pressure, wet and dry bulb thermometer, dew point; heating and cooling of air by rapid compression or expansion, formation of rain. Simple experiments on conduction, convection, and radiation.

Propagation of light; shadows, photometry; reflexion and refraction at plane and spherical surfaces; prism and spectrum; principle of the camera, telescope, and opera glass.

Properties of magnets; magnetic induction; magnetic lines of force; magnetometer. The earth as a magnet, dip and declination.

Static electricity; electrification; induction; electroscope.

Voltaic electricity; generation and effects of current, tangent galvanometer, electro-magnets, induced currents, electric bell.

IV.—BOTANY.

This syllabus is intended to indicate, in brief outline, such an elementary course in Plant Biology as may serve to introduce the student to the study of Botany.

As its object is to encourage students to approach the subject through scientific observation and experiment, the syllabus includes only such topics as can be dealt with experimentally or by examination of specimens. All the work should be done practically. Arrangements should be made

for field work and excursions, and candidates should be encouraged to make observations for themselves out of doors in connection with the lessons given.

Candidates will be expected to have an elementary practical knowledge of the physical and chemical properties of air, water and soils, such as will enable them to study effectively the physiology of plants, and their adaptation to their environment. Questions may be set to test their knowledge of these subjects in so far as these are required to understand the principles of plant physiology.

Seeds and seedlings.—Structure of seeds of bean and maize. Germination. Effect of light, heat, and air upon growth. Comparison of seedlings at different stages grown both in sawdust and in garden soil. Measurements of height and dry weight.

Experiments to determine the amounts of water, carbon and ash in plants. Different kinds of soils. Simple analysis of soils.

The green leaf.—The structure of the leaf. Sun and shade leaves. Stomata. Veins. Connection of leaf with the stem. Continuity of conducting tissues. Transpiration. The function of the leaf in nutrition. Starch; chlorophyll. Extraction of chlorophyll with alcohol. Occurrence of starch in the leaf; experiments to show that light and carbon dioxide are necessary for its formation. The function of chlorophyll. Formation of sugar. Tests for glucose and cane sugar. Sensitiveness of the leaf to light. Heliotropism.

Stem and root.—General morphology. Paths taken by food substances. Plant foods in soils. Water cultures. Root tip; root hairs; osmosis and root pressure. Response to external stimuli, light, contact, moisture and gravity. Respiration, absorption of oxygen and determination of amount of CO_2 produced in normal respiration.

Buds.—Detailed study of the structure of the buds of sycamore and horse-chestnut. Arrangement of scale leaves and foliage leaves. Time of formation of the buds.

Structure of a few typical flowers.—The functions of the various parts. Pollination and fertilization. Dispersal of seed.

Study of common plants.—The structure of the sweet pea and crocus, so far as they can be examined with the naked eye or a pocket lens; the development of the seedlings of the sweet pea into the adult plant; the life history of the crocus during one year. The study of the following plants:—Ivy, potato, turnip, blue-bell (*scilla*), primrose, buttercup, coltsfoot, dandelion, celandine (*Ranunculus Ficaria*), water crowfoot, gorse, violet, pansy, wheat or oat, orchis. Attention should be paid to the special adaptations for protection, storage of food, vegetative reproduction, pollination, and dispersal, the kind of locality in which each plant is usually found and the details of structure which adapt it to its surroundings. Technical descriptions will not be asked for.

The identification of common trees, such as oak, ash, beech, sycamore, horse-chestnut, elm, poplar, alder, willow, birch, and hazel, at various seasons and by means of various parts and organs, such as buds, bark, leaves, &c.

The struggle for light and air studied in the field. Comparison of creeping plants, rosette-forming plants, grass-like plants, shrubs, trees, and climbing plants. Form and arrangement of leaves. Storage of food. Annuals, biennials, perennials.

VI.—Languages:—

One or two of the following:—Latin, Greek, French, German, Welsh, Hebrew.

No set books are prescribed for study. The passages for translation into English will be taken both from prose-writers and from poets.

Passages for translation from English into the Language, and in the case of modern Languages, exercises in free composition will be set.

A sound knowledge of simple accidence and syntax will be required.

For Official Use.

BOARD OF EDUCATION.

SYLLABUS OF
THE CERTIFICATE EXAMINATION OF
THE BOARD OF EDUCATION FOR
TEACHERS IN ELEMENTARY
SCHOOLS, 1916.



LONDON:

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SYLLABUS OF THE CERTIFICATE EXAMINATION OF THE BOARD OF EDUCATION FOR TEACHERS IN ELEMENTARY SCHOOLS, 1916.

REGULATIONS.

N.B.—Alterations in the Syllabuses are indicated by a marginal line.

1.—(a) The Board hold an annual Examination, called the Certificate Examination, to which candidates (other than students in Training Colleges) for recognition as Certificated Teachers in Elementary Schools are admitted on complying with the prescribed conditions.

(b) Persons who are employed in Schools in Scotland, or are living in Scotland at the time of the Examination, are not admitted.

(c) Persons who have passed the Certificate Examination in a previous year cannot be admitted to the Examination, except in so far as they may be admitted to take Hygiene and Physical Training as a separate subject in accordance with Regulations 10 (c) and (d) below.

2.—(a) The Certificate Examination, 1916, will be held on November 27th, 1916, and the four following days at such places as may be necessary.

(b) Copies of the Syllabus may be obtained on application to the Secretary, Board of Education, Whitehall, London, S.W.

(c) Specimen copies of the Syllabus are sent by the Board to all Local Education Authorities. On application being made by a Local Education Authority, a stock of the Syllabus will be supplied to them for distribution to candidates.

3.—(a) A candidate

(i) must be over 20 years of age on the 31st July, 1916 ;

(ii) must, as a rule, have passed, before 31st December, 1914, an Examination qualifying for recognition as an Uncertificated Teacher under Schedule I. C. of the Code ;

(iii) must, as a rule, have been recognised by the Board as an Uncertificated Teacher under Schedule I. C. of the Code, and have been employed in that capacity in Elementary Schools in England or Wales under Government Inspection for such a period as the Board may accept as sufficient. The period which will be accepted for this purpose will be either : (a) a period of a year's full-time service, if completed within twenty-four consecutive months, or (b) such period of half-time service, covering not less than two years in all, as the Board may approve in a particular case ;

(iv) must, if he has been a Pupil-Teacher, have completed the period for which he was recognised as such not later than 31st July, 1914.

(b) Conditions (ii) and (iii) do not apply to persons who have been recognised for not less than three years on the staff of Certified Schools for Blind, Deaf, Defective, or Epileptic Children.

4.—(a) Local Education Authorities for Part II. of the Education Act, 1902, are responsible for making the local arrangements for the examination of candidates in their area, that is, for supplying them with a Form of

Application, for receiving the Form from them when completed and transmitting it to the Board, and for deciding at what places there shall be Examination Centres and at what Centre each candidate shall attend. All communications regarding the arrangements for the Examination should be addressed to the Local Education Authority and not to the Board of Education.

(b) Application for permission to attend the Examination (either as a whole, or, in the case of Certificated Teachers, for the purpose of taking Hygiene and Physical Training only) must be made on the prescribed Form, copies of which should be obtained from the Local Education Authority for the County or County Borough in which the candidate is employed or (if not in employment) resides. Candidates employed or residing in a town which is not a County Borough should apply to the Authority for the County in which the town is situated.

(c)—(i) All candidates taking the Examination as a whole are required to pay an entrance fee. The fee will be 10s. for all candidates whose applications reach the Local Education Authority on the prescribed Form not later than the 1st September, 1916. Candidates whose applications on the prescribed Form reach the Local Education Authority after September 1st but not later than October 2nd will be required to pay an entrance fee of 1l. Applications which reach the Authority after October 2nd will be entertained only in exceptional circumstances, and any candidate so applying will be required to pay a fee of 2l. No fee should be forwarded with the Form of Application. Instructions as to how the required fee is to be paid will be sent with the Form admitting candidates to the Examination.

(ii) Candidates taking Hygiene and Physical Training as a separate subject will not be required to pay an entrance fee, but their applications on the prescribed Form for permission to attend the Examination should reach the Local Education Authority not later than 1st September, 1916.

(d) As the procuring of the information required for the purpose of filling up the Form of application may cause delay, candidates should obtain the Form in good time.

5.—(a) Before a candidate can be recognised as a Certificated Teacher, he must satisfy the Board as to his age and physical capacity in the manner prescribed by the Elementary School Teachers Superannuation Rules, 1899.

(b) A Registrar's Certificate of Birth must accompany the candidate's application for admission to the Examination as a whole.

(c) All candidates who pass the Examination as a whole must be medically examined by one of the Medical Officers nominated by the Board for the purpose. Instructions will be sent to each successful candidate, together with a list of the Medical Officers. Candidates will be required to select one of the doctors on the list and to arrange for their examination by the one selected between the date of the issue of the results and the 30th April, 1917. The list contains the names of some Women Doctors. The fee for the examination, which is 10s. 6d., must be paid by the candidate. The doctor will forward the report of the examination direct to the Board.

6. The following subjects are included in the Examination :—

SECTION A.—Reading and Practical Teaching.

GROUP I.

SECTION B.—Principles of Teaching.

" C.—Music.

" D.—Drawing.

" E.—Needlework (for Women only).

} Compulsory

GROUP II.

- SECTION F.—English Language, Literature, and Composition.
 " G.—History.
 " H.—Geography.

} Compulsory.

GROUP III.

- SECTION I.—Elementary Mathematics (including Arithmetic).
 " J.—Elementary Science.

GROUP IV. (OPTIONAL).

- SECTION K.—A Language other than English approved for the purpose by the Board.
 SECTION L.—A Language other than English approved for the purpose by the Board.
 SECTION M.—Hygiene and Physical Training (*see* Regulation 10).

7. Candidates who have been employed in Public Elementary Schools, Certified Efficient Schools, or Certified Schools for Blind, Deaf, Defective, or Epileptic Children in some recognised capacity for not less than one year during the two years immediately preceding the Examination, and have not been reported on unfavourably by His Majesty's Inspector in Reading and Practical Teaching, will not be tested in these subjects. Such candidates will be considered to have complied with the requirements of Section A. Other Candidates will be tested in Reading and Teaching by the Inspector; the necessary instructions will be sent to them when they are admitted to the Examination.

8. All candidates who comply with the requirements of Section A and obtain satisfactory aggregates of marks in each of the Groups I., II., and III., and in these three Groups combined, will be considered to have passed the Examination.

9. Candidates will be informed individually of the result of their examination. As soon as possible after the Examination, a general Result List will be published, in which the names of candidates who have passed the Examination will be arranged in alphabetical order without classification. Appropriate marks will be placed in the Result List against the names of candidates who obtain distinction in Section B, C, D, F, G, H, I, J, K, L, or M, and also against the names of candidates who pass in Section K, L, or M, without obtaining distinction.

10.—(a) No candidate will be eligible for examination by the Board in Hygiene and Physical Training unless he is shown to the satisfaction of the Board to have duly attended* an approved Course of Physical Training at some time during the period between August 1st, 1914, and November 30th, 1916. The following conditions must be satisfied in the case of any Course which is proposed for approval for this purpose:—

- (1) The Course must be conducted by a teacher fully qualified to interpret the principles of the Swedish system of Physical Exercises as set out in the Board's Syllabus.
- (2) The Course must include not less than 40 hours' instruction, and must (unless alternative arrangements are specially approved by the Board) extend over a period of not less than six months.
- (3) Special application for the approval of the Course for the purpose of this Regulation must be made to the Board not later than 1st January, 1916, whether or not recognition of the Course is also desired under the Regulations for Technical Schools, &c. If such recognition is desired it should be stated on the application.

* Every candidate will be expected to have completed at least two-thirds of the total number of attendances at the approved course.

(b) Candidates will be tested partly by a written examination in Hygiene and the Theory of Physical Exercises, which will be held with the main part of the examination in November, and partly by a practical test in Physical Exercises, which will be conducted by an Inspector of the Board, as a rule, at the class in which the candidate is receiving instruction.

(c) The Board are prepared to admit to examination in Hygiene and Physical Training taken as a separate subject all teachers recognised as Certificated Teachers or qualified for such recognition, with the following exceptions:—(a) Teachers who have already passed in Hygiene and Physical Training as an optional subject in the Certificate Examination; (b) Teachers admitted to a Training College in 1908 or a later year whose approved course included Hygiene and Physical Training, and who were examined in those subjects.

(d) The provisions of Regulation 10(a) and (b) apply to candidates taking Hygiene and Physical Training as a separate subject.

(e) Certificated Teachers who pass, with or without distinction, in Hygiene and Physical Training taken as a separate subject will receive a statement showing that they have done so.

11.—(a) Candidates who pass the Examination as a whole, and who also satisfy the Board within the period stated in paragraph 5 (c) above as to their age and physical capacity in the manner prescribed by the Elementary School Teachers Superannuation Rules, 1899, will under Schedule I. A. of the Code be recognised as Certificated Teachers from April 1st, 1917. Each candidate who passes the Examination will be informed whether he is entitled to recognition as a Certificated Teacher after the Board have considered the report of the Medical Officer (see paragraph 5 (c) above).

(b) A Teacher who is qualified for recognition as a Certificated Teacher under Schedule I. A. of the Code, with the exception that he has failed to satisfy the Board in the manner prescribed by the Elementary School Teachers Superannuation Rules, 1899, of his physical capacity, may, if the Board think fit, be given the status and position of a Certificated Teacher for the purposes of Articles 9 and 12 of the Code, but not for the purposes of the Elementary School Teachers (Superannuation) Act, 1898.

12. The Papers set in the Examination will be so framed that candidates having any real knowledge of the subject will be able to obtain a fair proportion of marks. A certain number of harder questions will be included in order to give advantage to candidates who deserve to obtain distinction.

13. Where special arrangements approved by the Board have been made by a University for the instruction and examination of candidates for recognition as Certificated Teachers in Elementary Schools, the Board may accept a Certificate granted by the University instead of success in the corresponding subjects at the Certificate Examination. Candidates who desire to offer University Certificates in place of subjects included in the Certificate Examination, 1916, must make application before 1st January, 1916, on a special Form which will be supplied by the Board. Such candidates will not be admitted to the Certificate Examination, 1916, unless they have obtained their University Certificates in all the subjects in question.

14. The Papers set at the last Certificate Examination are published separately in pamphlet form and may be obtained from Messrs. Wyman & Sons, Ltd., Fetter Lane, E.C., price 6d. (by post 7d.). The Result Lists of previous Examinations also may be obtained from Messrs. Wyman, price 6d. each. (by post 7d.).

DETAILED SYLLABUS OF THE SUBJECTS OF THE EXAMINATION.

Any Paper may contain questions on the method of teaching the subject to which it relates.

Defective spelling or handwriting will be taken into account in estimating the value of a candidate's work.

SECTION A.—READING AND PRACTICAL TEACHING:—

(For certain candidates only; see Regulation 7.)

READING:—

Reading aloud with ease and clear enunciation.

Candidates will be expected to read passages from two books selected by them from among the books prescribed for general reading in Section F. The Inspector will hear candidates read from these books, and also at his discretion from any other book.

PRACTICAL TEACHING:—

A lesson to a class in the presence of the Inspector. The lesson may be in any compulsory subject included in the Syllabus, at the discretion of the Inspector.

SECTION B.—THE PRINCIPLES OF TEACHING:—

I.—i. Successive stages of child life from infancy to adolescence, their characteristics, physical and mental: interests and activities natural to each stage: connexion of these with attention and with the means of securing it.

Backward and precocious children and the means of dealing with them. Fatigue and the usual signs of it. Other common and avoidable causes of inattention.

ii. Types of school buildings and their connexion with school organisation and health. Conditions of healthy work in school: cleanliness and the means of securing it: dangers arising from infection and the means of avoiding them. Detection of fatigue, distress, mental deficiency: methods of dealing with them.

Forms of organisation: classification and promotion of scholars: the proper use of the school staff.

iii. The problem of discipline at various stages of school life: discipline and order: the right treatment of younger scholars.

The formation of good habits. The value of a good school tradition: the cultivation of corporate life.

School institutions: the library: games: reading circles, etc.

II.—i. Subjects of the curriculum and reasons for their inclusion: their relative importance at different periods of school life: possible variations to meet different circumstances: the importance of securing connexion and continuity.

ii. Means of learning at the disposal of the child at various ages: opportunities for using them both freely and under guidance: imitation; observation: the use of the senses: forms of expression and their importance.

iii. Methods of teaching in general: the characteristics of the collective lesson: possibility of individual teaching and of teaching classes in sections: place of exposition and of catechetical teaching: framing questions and dealing with answers: method of dealing with mistakes, oral and written: methods of encouraging private study and self-help in scholars: variations in methods to suit different stages of school life.

iv. Schemes of work : preparation of single lessons and series of lessons : rough or working notes : various aims and methods of revision : the arrangement of the time-table.

III.—METHODS OF TEACHING THE FOLLOWING :—

i. Language : means of securing clear articulation and accurate hearing : use of stories : continuous speech and written composition : reading aloud : silent reading : training in the use of books : means of securing correct spelling : place of grammar : cultivation through prose and poetry of a taste for literature.

ii. Number and elementary mathematics : methods and apparatus : practical instruction and its relation to handwork : means of securing accuracy.

iii. Manual occupations, including drawing and writing : their educational value and right use in connexion with other subjects : methods and materials at various stages : needlework.

iv. Observation lessons and nature study : place of investigation and of information : indoor and outdoor work : selection of material for schools differently situated : connexion with gardening.

v. Geography : association with nature study : descriptive geography and stories : cause and effect in geography : use and construction of maps : school journeys.

vi. History : aims and methods at different ages : use of chronology : great men and their connexion with great events : place of local history : citizenship.

vii. Singing : simple voice training : sight-singing : choice of songs.

N.B.—1. There will be no set book for formal examination but candidates will be expected to display in their answers an acquaintance with the "Suggestions for the consideration of Teachers, &c." issued by the Board.

2. Questions will be set which bear directly upon methods of teaching in Junior and Infants' schools.

3. The Paper will include special questions for sighted teachers in Certified Schools for Blind Children, and for teachers in Certified Schools for Deaf, Defective, or Epileptic Children. While it will be open to such teachers to attempt questions in any part of the Paper, they will be able to answer the full number required from the special section appropriate to their case.

SECTION C.—MUSIC :—

(i) THEORY OF MUSIC IN BOTH NOTATIONS :—

STAFF NOTATION.

(1) Notes.

Their position on the treble and bass staves. All the major and minor scales. Diatonic and chromatic intervals. Transposition.

(2) Time.

The value of notes, dotted notes, tied notes and rests. Signatures of all simple and compound times. Accent and syncopation. Contents of bars. Transcription from one time to another.

(3) Musical terms in common use.

(4) The compass and registers of the various voices of men, women and children. General rules relating to voice training. Translation of a short passage into Sol-fa Notation.

TONIC SOL-FA NOTATION.

(1) Notes.

The major and minor modes. Diatonic and chromatic intervals. Names of chromatic tones. Removes of keys, bridge-notes and distinguishing tones.

(2) Time.

All the measures in common use. Division of pulses into thirds and quarters. Transcription of values by doubling, halving, etc. Accent and syncopation. Translation of a short passage into Staff Notation.

Candidates may also be asked to write a sight-singing test in any time, or key suitable for any class.

(ii) PRACTICAL MUSIC:—

[Candidates who are unable to take this part of the syllabus may omit it; but they will, of course, obtain fewer marks than those who take the whole syllabus.]

Graded tests in tune, time, and ear-training, based upon the requirements of the various school divisions.

The tests must be sung from both the Staff and Tonic Sol-fa Notations.

SECTION D.—DRAWING:—

1. Drawing on paper. Each candidate will be expected to draw on a half imperial sheet of paper, toned or otherwise, (i) a natural object, or (ii) a hand-made or artificial object, resting or suspended, or a group of objects, placed before him, to be represented as seen from the point of view at which the candidate may be seated. The drawing may be made in any medium, and should be as complete as the candidate can make it.

2. A Paper will be set to test (i) the candidates' knowledge of the aims to be kept in view in the teaching of Drawing, and of the methods by which a teacher should try to realise those aims; and (ii) their ability to illustrate by means of Drawing, not only lessons in Drawing, but also lessons in knowledge of the common facts of the external world, and in other subjects taught in Public Elementary Schools.

3. Students should come provided with water-colours (not dyes), brushes, water-bottle and dipper, pencils, pastels, etc., and also drawing-boards and drawing-pins.

SECTION E.—NEEDLEWORK (for women only):—

I.—THEORY.

A short Paper will be set on the methods to be employed in teaching Needlework in Public Elementary Schools.

II.—PRACTICE.

The following exercises will be set:—

(a) A test in practical Needlework or Knitting. The exercise will be based on the Needlework and Knitting usually required from children in a Public Elementary School, and will include the stitches used in making and repairing simple garments;

and

(b) An exercise in cutting out and putting together the various parts of a garment.

SECTION F.—ENGLISH LANGUAGE, LITERATURE, AND COMPOSITION:—

1. The principles and practice of English Composition.

2. For detailed study:—

(a) *Shakespeare*: "Macbeth"

and

(b) *Bacon*: The following Essays:—

Of Anger, Friendship, Vain-Glory, Suspicion, Counsel,
Beauty, Nobility, Usury, Negotiating, Death, Simulation and
Dissimulation, Goodness, and Goodness of Nature.

3. For general reading:—

(a) An anthology of verse.

The following are suitable, but candidates may use any similar
book:—"The Golden Treasury of Songs and Lyrics" (F. T.
Palgrave), "The Oxford Book of Verse" (A. T. Q. Couch),
"The Paradise of English Poetry" (H. C. Beeching),
"English Lyrics from Chaucer to Poe" (W. E. Henley),
"The Flower of the Mind" (A. Meynell).

(b) Some of the following:—

Shakespeare: "Romeo and Juliet," "Cymbeline," "Antony
and Cleopatra," "The Taming of the Shrew."

Milton: "Comus," "Arcades," "Lycidas," "Sonnets."

Pope: "Essay on Man," Books I. and II.

White: "Natural History of Selborne."

Gibbon: Autobiography.

Jane Austen: "Emma."

Scott: "Old Mortality," "Rob Roy," "A Legend of Montrose."

Byron: Selected Poems in the "Golden Treasury" series.

Dickens: "Pickwick Papers," "Dombey and Son."

Thackeray: "The History of Pendennis."

Mrs. Gaskell: "Cranford."

Trollope: "The Warden."

Whyte Melville: "The Queen's Mariages."

Matthew Arnold: "Essays in Criticism" (First Series).

It is recognised that general reading cannot be wholly tested by direct examination, although its effect upon the intelligence and style of the candidate should appear in every Paper. A large number of alternative questions will, however, be set, some of which all candidates who have read a fair number of the books suggested may reasonably be expected to be able to answer.

4. Candidates will be required to write an Essay.

SECTION G.—HISTORY:—

[Candidates may take either (1) or (2), but not both.]

(1) The development and working of the most important institutions in the government of the United Kingdom, including the local government of England and Wales, and the relations of the Colonies and Dependencies to the Imperial Government.

or

(2) The History of the growth of the British dominions outside Europe from the discovery of America to the present day.

SECTION H.—GEOGRAPHY:—

1. Mathematical and Astronomical Geography, including the interpretation and drawing of maps and charts, and a knowledge of map-projection.

2. Physical Geography; general distribution of land and water; principal factors determining climate; general distribution of winds, temperature, rainfall, tides and currents; common materials forming the Earth's crust; various types of land-relief, coastline, and river features; lake systems; the distribution and effects of volcanoes.

3. Characteristics and distribution of the following vegetation zones—tundras, coniferous forests, deciduous forests, prairies, steppe-lands, deserts, tropical forests.

The general distribution of plants, animals, and man in relation to these natural regions. Areas of dense and scanty population as determined by land-configuration, climate, geographical position, and productions.

4. Geography of the British Isles.

(a) Physical Conditions.

General knowledge of the structure of the United Kingdom; influence of rock-structure on topography.

Distribution of land-forms, mountains, plateaux, escarpments, and plains.

General distribution of soils as determined by structure and topography.

River systems in relation to topography. Distribution of temperature and rainfall over the United Kingdom, including a knowledge of the rainfall map and isothermal lines.

Distribution of mineral wealth; coal, iron, tin, copper, and other minerals; building stones and materials.

(b) Economic Geography.

Distribution of agricultural products and industries as determined by physical conditions, especially cereal, fruit, and pasture areas; textile industries; mining industries; iron and ship-building centres.

Distribution of population. Distribution of towns and their geographical significance. Arteries of commerce, natural and artificial.

5. An advanced knowledge of Europe and a general knowledge of the World as a whole, especially of those portions which belong to the British Empire.

Candidates will be expected to show a more thorough grasp of geographical principles than is required for the Preliminary Examination. They are recommended to pay close attention to the connexion of physical geography with historical, political and economic geography.

Questions will be set having special reference to Wales.

SECTION I.—ELEMENTARY MATHEMATICS (INCLUDING ARITHMETIC):—

Two Papers will be set in Mathematics. The first Paper, which must be taken by all candidates, whether men or women, will contain questions on Arithmetic and Algebra, Part I. It will also include some simple questions in Geometry, but women candidates will be able to answer a sufficient number of questions without attempting the questions in Geometry. The second Paper will contain questions in Arithmetic and Algebra, Part II, and in Geometry. All men candidates will be required to take it, but women candidates need not take it unless they desire to obtain distinction.

ARITHMETIC AND ALGEBRA.

PART I.

Arithmetic, excluding Troy Weight, Apothecaries' Weight, True Discount, Cube Root, Foreign Exchange, and Scales of Notation. Questions on Stocks will not involve a knowledge of "Brokerage." Candidates must be acquainted with the Principles of the Metric system. Algebraical symbols and processes will be generally permitted.

Algebra as far as, and including, simple equations of one unknown, with easy problems leading up to such equations.

PART II.

Quadratic equations of one unknown, simple simultaneous equations of two unknowns and easy simultaneous equations involving the squares of the unknowns and problems leading up to these equations.

Arithmetical progressions; geometrical progressions to a finite number of terms; square root, highest common factors and lowest common multiples, ratio and proportion. The use of logarithmic tables.

N.B.—Questions involving graphical methods may be set in both parts, and when such questions are proposed squared paper will be provided.

GEOMETRY.

Every candidate must be provided with a ruler graduated in inches and tenths of an inch and in centimetres and millimetres, a small set square, a protractor, compasses furnished with a hard pencil point, and a hard pencil.

Figures should be drawn accurately with a hard pencil.

Questions may be set in which the use of the set square or of the protractor is forbidden.

Any proof of a proposition will be accepted which appears to the Examiners to form part of a logical order of treatment of the subject. In the proof of theorems and deductions from them, the use of hypothetical constructions is permitted.

PRACTICAL GEOMETRY:—

The following constructions and easy extensions of them:—
Bisection of angles and of straight lines. Construction of perpendiculars to straight lines. Simple cases of construction from sufficient data of triangles and of quadrilaterals. Construction of parallels to a given straight line. Construction of angles equal to a given angle. Division of straight lines into a given number of equal parts.

Construction of a triangle equal in area to a given polygon. Construction of tangents to a circle. Construction of common tangents to two circles. Construction of circumscribed, inscribed, and escribed circles of a triangle. Construction of a segment of a circle containing an angle of given magnitude. Division of straight lines into parts in any given proportion. Constructions of a fourth proportional to three given straight lines, and of a mean proportional to two given straight lines. Division of straight lines in extreme and mean ratio. Division of a straight line internally or externally into segments, so that the rectangle under the parts is equal to a

given square. Construction of regular polygons in and about circles. Construction of a circle from sufficient data of the following character:—

(1) radius given, (2) point on the circle given, (3) contact with a given straight line or circle, (4) contact with a given straight line at a given point. Construction of a rectilinear figure to a specific scale or of specified area, and similar to a given figure. Construction of a square equal in area to a given polygon. (In cases where the validity of a construction is not obvious, candidates may be required to indicate the reasoning by which it is justified.)

Illustration and explanation by means of rectangular figures of the following identities:—

$$\begin{aligned} k(a + b + c + \dots) &= ka + kb + kc + \dots \\ (a + b)^2 &= a^2 + 2ab + b^2, \\ (a - b)^2 &= a^2 - 2ab + b^2, \\ a^2 - b^2 &= (a + b)(a - b). \end{aligned}$$

THEORETICAL GEOMETRY:—

Candidates should be acquainted with the fundamental propositions concerning angles, parallel straight lines, and the congruence of triangles, such as are contained in the substance of Euclid, Book I., Propositions 4-6, 8, 13-16, 18, 19, 26-30, 32. Easy deductions from these theorems will be set, and arithmetical illustrations will be included.

The substance of the theorems contained in Euclid, Book I., Propositions 33-41, 43, 47, 48; and Book III., Propositions 3, 14-16, 18-22, 31, 32, 35-37; Book VI., Propositions 1-8, 19, 20, 33, together with Propositions A and D. Questions upon these theorems, easy deductions from them, and arithmetical illustrations will be included.

Definitions of the trigonometrical ratios; the solution of right-angled triangles; easy problems on heights and distances.

In dealing with proportion, it may be assumed that all magnitudes of the same kind can be treated as commensurable.

Candidates will be expected to be acquainted with the forms of the cube, the rectangular block, the tetrahedron, the sphere, the cylinder, the wedge, the pyramid, and the cone.

SECTION J.—ELEMENTARY SCIENCE:—

Candidates must show a practical knowledge of the subjects taken; they should have performed the greater part of the experimental and observational work themselves, and the questions will be framed on this supposition.

The experiments in the following Syllabuses should be closely connected, and should be made with some definite object in view. The instruction should aim at creating in the students an interest in the changes and operations which they see going on around them, and also a desire to understand them. For this purpose the materials used should wherever possible be those met with in common life.

Candidates will be expected in the Examination to be able to apply their knowledge to problems of everyday life; their exercises should therefore be devised to attain that end and to induce them to try to explain for themselves the various facts and changes which they see, and which should themselves often be made the starting point of their studies. The Syllabuses are not exhaustive and the various applications have as a rule been purposely omitted; they should, however, be supplied by both students and teachers.

Candidates may be examined in whichever they prefer of the two alternative Syllabuses set forth below.

Candidates must come provided with a ruler graduated in inches and tenths of an inch and in centimetres and millimetres, a small set-square, a protractor, compasses furnished with a hard pencil point, and a hard pencil.

SYLLABUS No. I.

(ALTERNATIVE TO SYLLABUS No. II.)

Candidates who take this Syllabus must take the Introductory Section and also one of the Sections A, B, or C.

Introductory Section.

Lengths; areas; volumes; weights; British and metric systems; simple lever-balance; density of solids and liquids; principle of Archimedes; specific gravity; flotation, hydrometer, and lactometer; U tube; barometer.

Measurement of expansion by heat of solids, liquids, and gases. Convection currents in both liquids and gases. Applications to hot-water circulation systems, and ventilation. Thermometers. Experiments on melting and solidifying points, on boiling points and on evaporation and condensation with the following substances: paraffin wax, butter, margarine, water, salt solution, methylated spirits; and with fat and olive oil in connexion with cooking.

Measurement of heat; specific and latent heats, treated very simply.

Study of the effect of heat and acids on such common substances as chalk, washing soda, bicarbonate of soda, iron, copper, lead; the burning of starch, sugar, animal and vegetable matters; the rusting of iron, and the burning of phosphorus and magnesium. These experiments should lead to a knowledge of the composition of chalk, air, and water, and should have shown that carbon, iron, copper, etc., unite with oxygen to form oxides, and that foodstuffs such as starch and sugar contain both carbon and hydrogen.

Solubility of solids and liquids in hot and cold water, in alcohol, benzine, and other solvents, *e.g.*, salt, sugar, starch, oils, grease, resin, etc.

Hard and soft waters; soap solution; natural waters; impurities in water.

Experiments to find the amount of water contained in such substances as milk, vegetables, meat, soap.

Many of the above changes should be studied quantitatively, *e.g.*, the increase or decrease in weight; the volume of gas evolved from known weights of substances.

A.—Chemistry.

In addition to the paragraph on Chemistry in the Introductory Section, the following:—

Boyle's Law. Further study of chemical change.

The following reactions should be studied and a knowledge of the products will be expected:—

Action of strong sulphuric acid on salt and nitre.

Action of hydrochloric acid on red lead and manganese dioxide.

Action of strong sulphuric acid on copper.

Study of the formation of salts. Preparation and properties of ammonia. Properties of caustic soda and potash. Alkalis and acids contrasted. Quantitative experiments in neutralisation. Acids, bases, and salts. Solution, solubility curves.

Simple practical study of oil, fat, albumen, starch and sugar.

The composition by volume of the following—hydrogen chloride, ammonia, gaseous oxides of nitrogen and carbon.

A detailed study of the preparation and composition of various compounds chosen with a view to the explanation and proof of the laws of gaseous combination, definite and multiple proportion.

The atomic theory. Formulae and equations.

B.—*Physics.*

(Candidates will not be required to cover the whole Syllabus.)

The subject matter contained in the paragraphs on Measurement and Heat in the Introductory section.

Boyle's Law. Measurement of force by spring balance or dynamometer; parallel forces; centre of gravity; parallelogram and triangle of forces; inclined plane; simple pendulum; statical couples; moment of a force; motion of falling bodies; units of mass, force, and work, etc.

Transference of heat; quantity of heat; specific and latent heats; dew point; vapour pressure and boiling point.

Propagation of light; shadow; photometry; laws of reflection and refraction, with reference to plane surfaces; lenses; focal lengths; real and virtual images; simple telescope and microscope; prism and spectrum.

Properties of magnets; magnetic induction; magnetic lines of force; Earth as a magnet, dip and declination. Electrification by friction or induction; conductors and insulators; gold leaf electroscope; distribution of electrification on conductors; hollow conductors. Simple voltaic cells; effects of electric current; magnetic field; electro-magnets; measurement of current.

C.—*Botany.*

Structure and germination of seeds. Bean, pea, wheat, maize, sycamore, oak, and sunflower. Rate of growth of root and stem; experimental demonstration of direction of growth of these two organs; influence of light and gravity upon the direction of growth.

Experiments on the physiology of plant-nutrition. The structure and function of the leaf, stem and root. Absorption of water and soluble salts by the root. Root hairs. Experimental demonstration of root-pressure. Growth of plants in different nutrient solutions. The paths taken by food materials in their passage through the plant. Diastase. The transformation of starch into sugar.

The flower. The parts and their functions. Experiments on effect of removing stamens or pistil. Relations of plants to insect life. Wind pollination. Formation of fruit. Dispersal of seed.

General structure, appearance, and arrangement of the young leaves, and mode of expansion of the buds, of sycamore, horse chestnut, oak, Scots pine and larch.

Study of common plants. The structure of the sweet pea and crocus, so far as they can be examined with the naked eye or a pocket lens; the development of the seedlings of the sweet pea into the adult plant; the life-history of the crocus during one year. The following plants should also be studied:—Ivy, potato, blue bell (*scilla*), primrose, cowslip, buttercup, celandine (*ranunculus ficaria*), dandelion, coltsfoot, daisy, gorse, clover, vetch, scarlet runner, bean, violet, pansy, orchis, dog-rose, hawthorn, strawberry, cleavers, heath, crowberry, water-crow-foot, marsh marigold, bittersweet (nightshade), common grasses (three or four—including wheat and oat), wood-sorrel. Attention should be paid to any special adaptations for protection, storage of food, pollination, and dispersal, the structure of the flower, the time of flowering, the kind of locality in which each plant is found, and the details of structure which adapt it to its surroundings. Technical descriptions will not be asked for.

The identification of the following common trees at various seasons and by means of various parts and organs such as buds, bark, leaves, etc.:—Oak, ash, beech, sycamore, horse chestnut, elm, poplar, alder, willow, birch, hazel, mountain ash, Scots pine, larch, lilac, laburnum.

The struggle for light and air studied in the field. Comparison of creeping plants, rosette-forming plants, grass-like-plants, shrubs, trees and climbing plants. Form and arrangement of leaves. Storage of food. Annuals, biennials, perennials.

The course is intended to serve as a training in scientific observation and experiment. It includes only such parts of the subject as can be dealt with experimentally or by the examination of specimens, and affords ample opportunity for out-door observations and field-work.

SYLLABUS No. II.

Elementary Rural Science and Gardening.

The Chemistry and Physics of air and water so far as they may be required to understand clearly the phenomena of elementary plant physiology.

Seeds. A variety of seeds should be examined and the conditions of germination and mode of growth studied.

Roots. Effect of gravity. Rate of growth. Root hairs. Absorption. Examination of various forms of roots.

Leaves. Structure. Why leaves are flat. Leaf veins. Position of stomata. Experiments in transpiration and the movement of sap in stem. Conditions which determine the loss of water by the leaves. Effect of sunlight, and other conditions necessary for the formation of starch. How starch feeds the plant. Disappearance of starch at night. Conversion of starch into sugar.

Stem and Buds. Development of buds. Structure of woody stem. Yearly growth of stem. Examination of cross-sections of stems and location of starch. Budding and grafting. Formation of roots on cuttings. Creeping stems, above and under ground. The development of a bulb and corm traced from month to month.

Flowers, Fruits, and Seeds. The parts of a flower and their uses. Transference of pollen. Catkins. Study of fruits. Dispersal of fruits and seeds.

Review of Plant Life. Early dependence on food provided by parent. How the plant obtains, stores, and spends its food. Annuals and biennials, bulbs, tubers, and perennials.

Plant Life supplied by Soil. The ashes of plants examined to obtain indications of food requirements. The tracing of ash ingredients and nitrogen to the soil by plant cultures. How plants appropriate soil food:—The part played by water and carbonic acid.

Origin and Composition of Soils. Soils and subsoils studied *in situ*. Experiments on the mechanical composition of various soils. Classification of soils and study of their properties, including porosity and capillarity. The effect of lime on soils. The difference between surface soil and subsoil. Decayed plant substance. Humus and its fermentation.

Work to be done in the Garden. The practical cultivation of lettuce, cabbages, cauliflower, beans, peas, beet, carrots, turnips, celery, onions, and potatoes.

Propagation of plants by cuttings and by layering, of roses by budding, and of corms and bulbs.

SECTION K. }
and } Optional.
SECTION L. }

One or two of the following Languages:—

LATIN.	GERMAN.
GREEK.	WELSH.
FRENCH.	HEBREW.

No set books are prescribed for study. The passages for translation into English will be taken both from prose-writers and from poets.

Passages for translation from English into the Language and, in the case of modern Languages, exercises in free composition will be set.

A sound knowledge of grammar and syntax will be required.

SECTION M.—OPTIONAL. HYGIENE AND PHYSICAL TRAINING:—

(1) Hygiene.

SECTION I.—INTRODUCTORY.

The place of man in the animal kingdom.
 The cell as unit of tissues and organs of the body.
 Structure and function, work and rest. Division of labour.
 The child a developing and immature human being. Factors (other than hereditary and antenatal conditions) influencing its development; environment; nutrition and training (particularly of brain and nervous system during plastic period of growth).
 The common characteristics of children in health.

SECTION II.—THE SKELETON AND MUSCULAR SYSTEM.

The skeleton and its development in the young. Joints. Locomotion.
 Importance of attitudes and postures. Spinal curvature.
 The muscular system and its relation to the nervous system.
 *Physical exercises, dancing and games. Muscular fatigue.

SECTION III.—THE DIGESTIVE SYSTEM.

The alimentary canal and the process of digestion, commencing in mouth. Hygiene of mouth and teeth.
 Amount and sorts of food for children, uses and values.
 The dangers to which people are exposed by taking too much or too little food, tainted food, alcohol, &c.†
 Signs of malnutrition. Rickets.

SECTION IV.—THE RESPIRATORY AND CIRCULATORY SYSTEMS.

The purpose of the circulation of the blood. Blood, heart and blood vessels. Anæmic children. The lymphatic system.
 The lungs. Purpose and mechanism of respiration. Breathing exercises.
 Obstructions to breathing (adenoids, &c.).
 Difference between fresh and expired air.
 Relation of respiration and circulation to nervous system. The effects of exercise, tight clothing, &c.
 Advantages of an open-air life.

SECTION V.—THE EXCRETORY SYSTEM.

Care of the body.
 Importance of personal cleanliness, regular habits, nutrition, clothing.
 Waste matter. Waste matter as a result of work, undigested food.
 Excretory organs and how they work; skin, kidneys, lungs, &c.

SECTION VI.—THE NERVOUS SYSTEM.

Brain, spinal cord, motor and sensory nerves.
 Reflex action. Brain centres and nerve cells. The way the brain works.
 Co-ordination and association.
 Requirements of a healthy nervous system (nourishment, regular habits, physical exercises, manual and intellectual work, periods of rest and change of occupation). Evil effects of malnutrition, overstrain, impure air, bad habits, alcohol. Mental dulness, feeble-mindedness, headaches, neuralgia; how to detect and deal with them in School.

* For the teaching of Physical Exercises the Board's official Syllabus should be followed.

† For instruction relating to alcohol the Board's Syllabus of *Lessons on Temperance* should be followed.

Development of child's nervous system. Sensory receptivity, reflex movement, imitation, attention, self-control. Nourishment and education of nerve cells. Development of motor centres by muscular exercise.

Physical and mental fatigue.

SECTION VII.—SENSE ORGANS.

Relation of sense to nervous system.

Their training and development.

Sense of Sight.—Structure of the eye. Eye muscles; mechanism of accommodation. Eye strain, particularly in young children.

Defects of vision and common eye diseases such as a teacher may notice.

Short and long sight, &c. Vision testing.

Effect on sight of bad light, long hours, small print, close work, &c., specially in childhood.

SECTION VIII.—SENSE ORGANS (*continued*).

Hearing.—Structure of ear. Causes and signs of defective hearing. Tests. How the teacher can train the sense of hearing.

Speech.—The structure and use of vocal organs. How to deal with defective articulation and train the speaking voice in school. Speech defects.

Sense of Smell.

Sense of Touch.—Co-ordination, temperature, feeling, muscular sense.

SECTION IX.—SANITATION OF THE SCHOOL.

Requirements of the healthy school:—

Suitability of site, soil, and construction (various types of school buildings).

Water Supply.—Collection, storage, and distribution. Various forms of pollution. Methods of prevention.

Sanitary conveniences (various types), drainage, refuse removal. Earth closets and their management.

Effects of sewer gas.

SECTION X.—SANITATION OF THE SCHOOL—(*continued*).

Ventilation—cubic capacity, amount of fresh air necessary. Impurities of atmosphere and their effects. Methods of ventilation.

Warming and lighting.

Equipment.—(Class-rooms, desks, blackboards, cloakrooms, lavatories, &c.) The Hygiene of Infant Departments.

Cleanliness.—Class-room as an object lesson in health.

Duties of individual in relation to health of community.

SECTION XI.—DISABILITIES AND DISEASES OF CHILDREN.

The relation of micro-organisms to disease. Conditions of their life. Relation of seed (bacteria) and soil (body tissues). Means of resistance. Chief characteristics of ailing children. Conditions disposing to disease.

Early signs and symptoms of ill-health in children (nervous conditions infectious diseases, parasites).

SECTION XII.—MEDICAL INSPECTION OF SCHOOLS, &c.

The objects and method of medical inspection of schools and school children.

Methods of detecting and dealing with physically and mentally defective children.

Direct and indirect means of cultivating good physical habits in school, and adapting education to the physical needs of the child. (Example and health of teacher, games, physical exercises, ventilation, cleanliness, absence of near-eye work.)

School closure and exclusion of children on medical grounds. First aid in minor injuries and common ailments.

Disinfection.

(2) Physical Training.

In the course of Physical Training attention should be given to the following subjects:—

- (i) *Practical Physical Exercises*, which should include all exercises, games, &c., of the Board's Syllabus of Physical Exercises for Public Elementary Schools, 1909. Simple apparatus work and more advanced exercises may be added if the conditions are suitable.
 - (ii) *The Theory of Physical Exercises*, which should follow the lines laid down in the Board's Syllabus of Physical Exercises. The relation of Physical Training to Hygiene, and the practical application of theoretical principles to school life, should be dealt with in some detail.
 - (iii) *Training in* (a) Commanding.
 - (b) Teaching fellow-students.
 - (c) Teaching a class of children.
-